THE STATE AS SHIPOWNER. See p. 145.
NOTES ON WELDING SYSTEMS. See p. 143.

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FEW officers in the merchant service will be found to express unqualified approval of the findings of the committee which was appointed by the Board of Trade to enquire into the subject of a standard uniform for officers in the mercantile marine. The question arose apparently from the similarity of the uniform of the officers of certain companies to those worn in the Navy, and it was thought desirable that a clear distinction should be drawn. If, as was stated, the proposal was warmly approved by the Imperial Merchant Service Guild and the Mercantile Marine Service Association—the two representative bodies of the officers and engineers—they will, we think, hardly be satisfied now that concrete proposals have been made by the committee. Apparently the uniform is to be "standard" for all officers in the merchant service irrespective of the company to which they belong. This creates a certain amount of difficulty, the large steamship companies claiming that there should be a certain degree of distinction between officers of different companies. This has been met by a concession to the ownerships by which the officers, if so desired, may wear the badge of the company while on board ship or if proceeding on shore for a short while on the ship's business. But we venture to think that even if this "concession" satisfies the ownerships it will not satisfy the officers themselves, who are notoriously proud of the particular company in which they belong, and it would appear that whilst perhaps the standard uniform may be desirable, at least there should be a distinction for each company, such as the cap badge as hitherto, or failing that, a common outline of badge in the centre of which the company's badge can be incorporated.

"Standard" Uniforms.

Considerable interest has again been aroused by the refusal of the directors of a shipping company to register transfers of shares. The law on this subject is clearly ascertained. Directors derive their powers in this matter from the articles of association of their company. If the articles confer upon them the discretionary power to refuse any transfer without assigning reasons they are free so to act, and unless it can be shown that they acted in bad faith the Courts will not interfere with their discretion. In the absence of such a provision in the articles, every shareholder has the right to transfer his shares to whom he will, even to a person of no substance. Any modification of the rule is a matter which must be regulated by the articles. Where the discretionary power to refuse transfers exists, the directors in this matter are really in the position of trustees for the company, and indeed they are bound to observe good faith towards the shareholders. Of course, in individual cases directors have to be guided by circumstances, but it is their duty to be regulated by the considerations of prudence which their business experience dictates.

Transfers of Shares.

It is now some eight months since the rate of discount on deferred premiums was altered from 10 per cent. to 8 per cent. by mutual agreement between underwriters and insurance brokers. An enquiry into the results of this action has revealed the interesting fact that, in the majority of cases, deferred premiums have been abandoned in favour of cash payments. It is probable that this result was foreseen to a certain degree by those concerned at the time the new scheme was inaugurated; but it is doubtful if the full extent of the change was anticipated. In any case the market has cause for congratulation in the complete success which has attended the measure. Not only has it resulted in a much quicker settlement of the quarterly accounts, but the clerical labour involved in the intricate book-keeping necessitated by the deferred system has been done away with. Moreover, in many cases where large sums were due for deferred premiums, a letter of guarantee from the broker's bankers was required by underwriters, a formality involving certain financial negotiations which are now unnecessary. The alteration has come about so gradually that it has attracted little attention, and it is only on looking back over the period which has elapsed since it began, that it is realised what a radical change has been made.

Deferred Premiums.

Underwriters frequently complain that claims are not presented for settlement as promptly as could be desired, and generally the broker and the owner are blamed for this delay. A claim which has recently been settled in the market shows that occasionally the force of circumstances alone is the delaying factor. The case in question concerns a collision between a French and British vessel, the latter being obviously to blame. The date of the accident was shortly before the outbreak of war. The matter was placed in the hands of a French Advocate to settle on the best terms possible, and he was apparently engaged in these negotiations when war broke out. When things had settled down after the universal chaos of August, 1914, it was found that no reply could be obtained to letters addressed to this gentleman, and it was not until late in 1915 that it was found that he had been called to the colours and was on duty with his regiment. The matter was then placed in the hands of another Advocate, who completed the settlement in the early days of 1917. After this the matter was taken in hand by the Average Adjuster, and the long-delayed claim was eventually

Delayed Claims.

presented to underwriters in the latter days of last year. It may be taken that the instance given here is no isolated one, and that in many cases where claims appear to be delayed beyond a reasonable time an equally good explanation of the delay is forthcoming.

Shipping After the War.

It would appear as though the doubts which have exercised the minds of both shipowners and shipbuilders as to the position of the shipping and the shipbuilding industries may be set at rest by the publication of the report of the Shipping and Shipbuilding Committee of the Board of Trade. Sir Albert Stanley, the President of the Board of Trade, in reply to Mr. Runciman, states that the first part of the final report of the committee signed by all the members, has been presented to the Board. When the whole report has been received, the question of publication will be considered. While the official language would lead one to suppose that the report might not be published, it is inconceivable that the findings of a committee which was formed in order to satisfy a strong and influential demand should not see the light of day. It will be remembered that the Shipping and Shipbuilding Committee over which Sir Alfred Booth has presided, was appointed in March, 1916, to consider the position of shipping and shipbuilding after the war. The need for strong action in order to safeguard the position of both shipping and shipbuilding is even greater now than it was then, and the apprehension of all concerned can only be allayed by the publication of the report showing what steps the Board of Trade are disposed to take in order to meet it.

British Shipping's Plight.

A fact which is worthy of note by the general body of consumers is that, although shipping is now completely under the control of the State, prices are higher rather than lower than they were and supplies are shorter. It is not suggested that, left to themselves, shipowners would have done better than that, but obviously they could not have done much worse. The point is, in any case, that shipowners are being severely handicapped for post-war operations without any appreciable results in the shape of relief for consumers. If our war policy were inspired by common sense, a considerable proportion of his excess profits would be given back to the shipowner for the purpose of rebuilding his fleet. Common sense is, however, the quality which our war policy most lacks. The things which are done are chiefly those for which there is the loudest clamour. Realising that, manufacturers, agriculturists and merchants are reviving their plea that shipping is not entitled, in the interest of the Empire, to exceptional treatment at the hands of the State. Shipping has never, of course, asked for exceptional treatment; all it seeks is fair play and to be left alone. But the industrial and trading interests indicated appear to be strongly of a mind not to leave it alone. They are clamouring for prohibition of conferences—are seeking, in other words, to induce the State to control freights. It is not easy to see why the prices which shipowners get for what they have to sell should be limited by law while all the interests from which they are obliged to buy are free to operate in an open market.

Employers and Labour Affairs.

So much of the time of the average shipbuilding or engineering employer is taken up with the negotiation of labour affairs that outsiders quite reasonably wonder how he manages to get through his ordinary legitimate work. Just now, with a great war in progress, and his industries under control, his duties of this character are exceptionally heavy. But they were heavy enough before the outbreak of hostilities, and promised to make, even with a continuance of normal conditions, still larger calls on time and attention. So heavy were they actually and in prospect that thoughts were seriously entertained in several important quarters of appointing a special director to deal exclusively with Labour affairs. As matters are, of course, particular directors or partners attend conferences and meetings of employers, and the arrangement works fairly well. But it is not an efficient arrangement, partly because it involves the use of big men on small occasions and partly because it lacks the solid basis of a sound organisation of Labour affairs. A more suitable plan would be the appointment of a Labour Director whose duty was principally to keep in close touch with the organiesd labour employed in the works. By holding daily conferences with the foremen he would soon have the necessary degree of intimacy, and if he were the right sort of man he would eventually succeed in preventing a considerable number of troubles maturing. He would, as a matter of course, take his share of meetings and conferences, but his best service would probably be to keep his fellow directors accurately informed from week to week on Labour affairs generally. The idea is worthy of the consideration of, at any rate, large firms.

A.S.E. and Man-Power.

In deciding to take a ballot of the members for or against the Government's man-power proposals, the delegate meeting of the Amalgamated Society of Engineers have, at any rate, demonstrated that the organisation's representative men are not absolutely devoid of common sense. For the proposals are the real issue between the A.S.E. and the Ministry of National Service, and not the question of whether the Society is, or is not, entitled to a separate conference. According to our reading of the undertaking given to the Society last year by Mr. Henderson, it is not entitled to a separate conference, and our view of the matter seems to be confirmed by the official record of the negotiations with the group. But the real issue is, as we have said, whether the A.S.E. approves or disapproves the man-power proposals, and it will be wise of the rank and file who are about to vote to bear that in mind. If they approve them they will come into line with the other workers belonging to their group. On the other hand, if they disapprove them they will indirectly set up a claim to preferential treatment which the community as a whole will strongly resent. In its logical conclusion that claim is that a father who was not a member of the Amalgamated Society of Engineers would be liable to Army service while his sons who were members would not. We hold no brief for the dilutees, a great many of whom no doubt went into munitions in order to avoid military service. Considering, however, the degree of skill to which a considerable number of them have attained, it is not, in our opinion, unreasonable to argue, as is argued, that their position under the Military Service Acts ought not, at any rate, to be worse than that of younger skilled engineers. The public will insist on fair play all round, and the A.S.E. will be wise to remember that.

Cunard and White Star Rumours.

Apart from the question of amalgamations and deals which continue to absorb attention, considerable shipping interest has during the past few days centred on the future activities of the two principal North Atlantic lines, as to which rumour has been busy. For instance, information comes from Vancouver to the effect that the Cunard Line has established an office in that city with a view to running a trans-Pacific service when the war is over. This need not, however, cause any surprise, as it has been known for some time that it has had an enterprise of the kind under consideration. In fact, it was reported last year that a lease of premises had been secured at San Francisco. These followed an agreement with the Canadian Northern Railway Company which, since then, the Dominion Government has decided to take over, a development that need not, however, interfere with the Cunard's plans. It will, indeed, probably be found that several British companies are prepared to engage in the trade of the Pacific when peace is restored. Now, as regards the report from New York about a proposed sale to a British syndicate of the British lines of the International Mercantile Marine Company, the White

Star being the most important, neither confirmation nor denial is, as yet, obtainable. Here, again, such a deal would occasion no surprise, bearing in mind prospective American maritime developments and the uncertainty of the British shipping outlook after the war. Moreover, not many weeks ago the combine disposed of its interests in the Holland-America Line to that concern, and it may have a desire to get rid of its other European holdings, so as to concentrate its activities nearer home. However this may be, British interests are amply safeguarded, as by an agreement concluded in 1902 between Mr. Gerald Balfour, then President of the Board of Trade, and the late Mr. Pierpont Morgan, the British companies in the combine were to remain British not only in name but also in reality. This arrangement was to hold good for 20 years, but it was made capable of further extension on five years' notice by either side.

Welding of Ships.

The subject of welding is becoming of increasing importance to the shipbuilder. Originally it was only the ship repairer who was called upon to employ this convenient method of joining two pieces of metal together, but gradually the process has been extended to the shipbuilding yard, and many jobs which were hitherto carried out by more cumbersome methods are now performed cheaply and well by welding, and the tendency during the last few years has been to adopt the process to jobs of increasing size and importance. We have heard of the drums of water-tube boilers being made by welding, and proposals have frequently been made for the welding of plates instead of riveting in the construction of ships' hulls. It has not been possible to refer in detail to the work which is being done in this direction, but now the Admiralty authorities have permitted Captain Caldwell to refer *en passant* in his paper on "Notes on Welding Systems" to what has been and what is being done in this direction. This paper, the first portion of which we publish in this issue (see page 143) will be read with great interest on account of its own intrinsic merits and on account of the general interest which is being taken in the subject with which the author deals, but no part, we believe, will be of greater interest than that in which he refers to the subject of "Welding of Ships."

Unsinkable Cargo Ships.

The possibility of constructing cargo ships which will survive torpedo attack has never been called in question. A minute system of subdivision is all that is required. A proposal has been put prominently forward recently on these lines, but so far has not been put into practice. The question of the subdivision of cargo ships is one which has frequently been debated. When the Bulkhead Committee considered this type of ship they arrived at the conclusion that it would not be wise to introduce any method which would unduly restrict the lengths of holds. In this decision the utility of ships was evidently given first place and the question of safety in case of bilging was found to be of secondary consideration. The conditions brought about by the unrestricted submarine warfare have brought new factors into the problem, and it becomes of primary importance whether this finding of the Bulkhead Committee should not be reversed—at least for the duration of the war. The close subdivision which has been recommended by the Khedivial Company might have the effect of rendering the vessels so divided unsuitable for the transport of certain types of cargo. What with the closer spaced transverse bulkheads and the introduction of longitudinal ones the actual capacity of the holds may be about one-sixth that of ordinary cargo ships. There can be little or no objection—from the point of view of utility—to vessels intended for food carriers being as closely divided as the safety factor demands; accordingly the present situation warrants an attempt at producing this unsinkable cargo ship. The construction of the latter will, however, take more time than that of the ordinary cargo ship, and it becomes a question whether the number of vessels thus lost by non-production will be less or exceed those which would be lost by destruction.

New Industries for Engineers.

We published last week the names of the committee of manufacturers and business men appointed by the Minister of Reconstruction to consider the provision of new industries for the engineering trades. The committee is to compile a list of the articles suitable for manufacture by British engineers which were either not made in the United Kingdom or were made in insufficient quantities, and for which there is likely to be a demand after the war. It is interesting to notice that the shipbuilding interest is represented on the committee, although we should like to see that representation far stronger than it actually is. The chairman, the Hon. H. D. McLaren, M.P., C.B.E., is a director of Palmers Shipbuilding & Iron Company, Ltd., and Sir W. Rowan Thomson is connected with David Rowan & Co. Each of these gentlemen will have considerable influence on the committee, and they will bring to it their practical knowledge of shipbuilding. It may be expected, therefore, that amongst the articles recommended for manufacture in this country will be the many tools and accessories utilised in the shipyard or on board ship which before the war were imported from abroad, and that, as a result, not only will the trade of the country benefit, but that it will be then possible to turn out a ship every detail of which and every tool which has been used in the building will have been entirely British.

Enemy Shipbuilding in 1917.

To Hermann Steinert was entrusted the delicate task of writing a review of shipbuilding in 1917 for *Hansa*. So far as concerns Great Britain and the United States, his conclusions are that in neither country was the year's production much over 1,000,000 gross tons. His statement concerning the Central Powers is sufficiently brief to be quoted *in extenso*. Its claims carry no particular conviction. It is not clear why *occasional* reports of launches should be taken as evidence of *abundant* construction; and the statement that there is probability in the opinion expressed abroad (?) that the merchant tonnage is up to the 1914 total, is obviously half-hearted. Steinert says: "Naturally no details can be given concerning the shipbuilding activities of the Central Powers. Occasionally published launching reports show that construction is still quite abundant with us. The opinion expressed in various foreign journals that our merchant fleet has been increased by new constructions to such an extent as again to reach the level of 1914, has much probability of truth. The law granting assistance to our shipowners has already been very fruitful and has led to numerous new orders, principally for small and medium-sized cargo steamers, of which yards had previously no lack. Existing yards, with few exceptions, are extended or will be extended, and half-a-dozen new yards were established during 1917. In Austria-Hungary most of the yards are at a standstill, and new constructions do not nearly cover war losses. Only a few new foundations and capital increases show that shipbuilding has not been quite forgotten in the Danube monarchy." The kindly tone of the reference to Germany's "war-brethren" is noticeable.

Condemning Conditional Contraband.

Prize court cases now seem to belong to a past phase of the war. One of the cases decided on appeal by the Judicial Committee of the Privy Council last week deserves a brief mention because it illustrates the manner in which our courts apply the doctrine of continuous voyage to conditional contraband. This case dates from the days when Germany was seeking to obtain supplies from America through the Scandinavian countries. The transactions invariably were sedulously wrapt up in a neutral guise. The intention was plainly to evade our regulations

as to continuous voyage and conditional contraband. The Declaration of London gave up the doctrine of continuous voyage in regard to conditional contraband, which would thus have freely passed to the enemy by circuitous routes. We did not adopt that rule, but by repeated modifications we laid down that conditional contraband should only be liable to capture on board a vessel bound for a neutral port (1) if the goods were consigned to "order"; (2) if the ship's papers did not show who was the consignee of the goods; or (3) if they showed a consignee of the goods in enemy territory. It was easy enough to make out bills of lading to evade this rule by consigning to a person in a neutral state. The Judicial Committee approving of the decision of the Prize Court has struck a blow at this facile method of evasion, by holding that the consignee in such cases must be really a person actually controlling the destination of the goods, otherwise they are liable to condemnation. A mere agent of straw is not sufficient. The decision is one of common sense.

SIR ERIC GEDDES' STATEMENT.

AS was only to be expected, the completion of a full 12 months of unrestricted submarine warfare has not been permitted to pass without comment either in this country or in Germany, but whereas we have been treated again to the usual blantant boasting on the part of the enemy, boasting which is so utterly at variance with truth and with the freely expressed expectations of a year ago, that even the German people might be expected to realise the hollowness of it all, in this country we have had a calm and reassured statement from the First Lord of the Admiralty which if indeed it does express a lofty confidence is free from loud boasts and unwarranted national self-justification. The *North German Gazette* and other papers publish articles on the occasion of the anniversary of the inauguration of unrestricted submarine warfare, glorifying this weapon and the strategic and moral results achieved by it, particularly against Great Britain, forgetful of the fact that a year ago these same papers were promising their readers that in six months this weapon would succeed in bringing us to our knees.

Sir Eric Geddes, in a statement to a representative of the Associated Press of America, shows how serious the position has been, and still is, and yet declares himself an optimist. "The submarine is held," he says. "A measure of its failure is found in the fact that the sinkings of merchant ships have now been reduced to a level lower than before Germany cast aside all restraint." Remembering, however, that his words will be earnestly studied in America, he is at pains to express the dependence of the Allies upon the shipbuilding effort of the Americans, and he would greatly regret if anything he said regarding the failure of German submarine warfare should be construed as minimising the need for "ships and yet more ships." American participation in the war must inevitably make large demands on merchant shipping, and yet we must contrive to keep up with the demands of the Allied armies and with the vital necessities of the European civil population. The First Lord urges again upon the American people the vital importance of their merchant shipping programme. "In no way," he says, "can the United States help more than in building ships."

But Sir Eric's statement will be read with the same serious consideration on this side of the Atlantic also, and he has therefore augmented our previous knowledge of the position with regard to the details of the campaign with regard to shipbuilding, whilst assuring the Americans that Great Britain is straining every resource to launch every ton of which she is capable, he states that "we are at the present moment building merchant ships at a higher rate than even in our record pre-war year, and before 1918 is over we shall be building shipping of all kinds at a rate more than double that record year." He is inclined to think that submarine destruction still exceeds the production of ships, but he throws light on a new phase of the submarine war when he says that now, since he made his last public statement, we are sinking submarines as fast as Germany can build them. He refers again to the "curves" which are drawn to show the progress of this unseen battle of intellects. These continue to bend in the right direction. Destruction of Allied shipping decreases steadily; construction of merchant shipping increases steadily; sinking of German submarines steadily rises. These three curves have all been published, but Sir Eric Geddes refers to another curve which he keeps, a curve representing what he terms the "factor of exaggeration" in the German official statements of U-boat results. This factor of exaggeration shows the difference between the official statement of the total amount of tonnage alleged to have been sunk, and the actual totals as shown in the Admiralty's records, and significantly enough, whilst this margin was fairly small in the early months of unrestricted warfare, it has since July last tended to increase, and Sir Eric sees in this curve a fairly accurate reflection of the German official mind, and an official confession that the U-boat campaign is regarded as a failure by its own leaders. And so taking all these curves together he "cannot foresee any way in which the situation can change, except for the better."

There is one other part of the speech which calls for comment, and that is where he speaks in defence of the British policy of entire secrecy regarding the sinking of U-boats, and he declares that he is not disposed to follow the Americans who recently published the fact that they had captured the crew of a submarine. "Our policy of secrecy," he says, "has much to do with the steady deterioration in the *moral* of German submarine crews. We know from prisoners how much this policy of secrecy wears on the German U-boat sailor. Every month there are German submarines which fail to return to their base, and of which nothing is ever heard. Day after day they are posted as missing; their fellows on other boats discuss and speculate upon their possible fate, and, finally, are themselves called upon to leave on an errand which they cannot help feeling is very likely to end in the same vague, unsatisfactory way. The German sailor's *moral* fails under the acid test of this oft-repeated experience of suspense. Once or twice this failing *moral* has come to the surface in strikes or mutinies, but more often it is only evidenced by a certain reluctance, timorousness and generally lowered efficiency. Even the commanders of the U-boats are not what they used to be. There are still brave and capable men among them, as there are still keen and daring crews, but they are the exceptions. The average submarine is in no way equal in efficiency to the U-boat of a year ago."

On both sides of the Atlantic Sir Eric Geddes' statement will be received with satisfaction, and whilst his confidence will not, we hope, lead to any slackening of effort, we trust even more earnestly that his confidence will prove thoroughly justified by future events.

MARINE INSURANCE AND THE PROXIMATE CAUSE.

MUCH legal learning has been expended in elaborating the idea of the "proximate cause" as applied to perils falling within policies of marine insurance. On the whole, however, the Courts have been inclined to reject metaphysical refinements and to interpret the doctrine on rough and ready, practical lines. The subject was discussed judicially by the House of Lords last week in the case of the Leyland Shipping Company *v.* the Norwich Union Fire Insurance, Limited.

This case concerned the loss of the steamer *Icaria*, belonging to the Leyland Company. She was on a voyage from South America to Havre and London, and was struck on January 30, 1915, by a German torpedo when she was 25 miles distant from Havre. She was very badly damaged, but the crew managed to bring her into port. She was moored along the Quai d'Escale, where she was

always afloat, but a gale springing up caused the vessel to bump against the quay. The harbour authorities fearing that she might sink and block the quay, which was required for purposes connected with the war, ordered the removal of the steamer. She was accordingly anchored in the outer harbour. The vessel was very much down at the head owing to the damage done by the torpedo and at each low tide she took ground forward. She was thus subjected to considerable strain, and on February 2 the forward end crumpled up and she became a total loss. Was her loss caused by enemy action, or by the perils of the sea? Which was the proximate cause? The Courts, including the House of Lords, were unanimous in holding that the vessel was proximately lost by enemy action.

This also was the contention of the underwriters. The policy of marine insurance covered the perils of the sea but contained a clause "warranted free of capture, seizure and detention, and the consequences thereof, or of any attempt thereat, and also from all consequences of hostilities or warlike operations." Liability was thus imposed on the underwriters for loss by a peril of the sea, but not for loss caused by the hostile torpedo. The owners of the vessel contended that the vessel had been proximately lost by a peril of the sea and that the underwriters were liable, and they invoked the application of the well-known rule of marine insurance that in considering whether a peril has been incurred, it is the immediate or proximate cause and not the remote that is looked at. They said that after the vessel had been brought into port a new cause intervened, wholly apart from the torpedoing. The vessel had been anchored in the outer harbour. She had grounded and was grievously strained in consequence, and that was the immediate cause of the loss. The torpedoing was the remote cause. In one sense the grounding was the last link in the chain of causation in the destruction of the *Icaria*. It was the last event in time. If it could have been isolated and, in fact, dissociated from the torpedoing then the latter could have been regarded as a remote cause, and the loss ascribed to a sea peril. But the interconnection between the two happenings was too intimate in their lordships' opinion to differentiate completely one from the other.

The House of Lords preferred to treat the grounding and loss in the outer harbour as indeed the final stage in an endeavour to salve the damaged vessel. If the vessel had been beached immediately after the accident and become a loss it would have been a direct consequence of hostilities. The *Icaria* was in constant danger of sinking from the moment she was struck, and the fact that two or three days elapsed in unsuccessful efforts to save her did not operate to render the explosion of the torpedo a remote cause of the loss. The risk of the vessel grounding in the outer harbour, as the Lord Chancellor said, was deliberately undertaken as part of the salvage operations. Lord Shaw, of Dunfermline, in his judgment, analysed in his usual acumen the meaning of the proximate as opposed to the remote cause in cases of this kind. The cause which was truly proximate, he said, was that which was proximate in efficiency although not necessarily in time. The real efficient cause of the sinking of the vessel was that she was torpedoed. She was all the time in the grip of the casualty. The true efficient cause never lost its hold. She perished through the operation of a war and not a marine risk.

SUPPLY OF ELECTRICITY FOR SHIPYARDS.

IN the few weeks that have elapsed since the report of the Coal Conservation Sub-Committee of the Reconstruction Committee was issued a good deal of careful and sympathetic consideration has been given to the proposals put forward in the report. Another and even more important pronouncement on the subject may be expected shortly in the report of the Board of Trade Electricity Supply Committee which has now practically completed its labours, and it is probable that the report will be ready for publication in the course of a few weeks. In no section of industry, perhaps, have greater advances been made in the use of electricity for power purposes than in shipbuilding and engineering, and leading men in these and allied trades have cordially welcomed the sweeping changes proposed in the report of the Sub-Committee. It may be pointed out that the great success which has attended the electrical undertakings in the Clyde and the North-East Coast districts is in no small measure due to the demand made on these concerns for current for use in shipyards and engineering works.

There is general agreement with the conclusions of the Sub-Committee that the present method of generating electricity in this country, with its multiplicity of stations, some of them very small, is inefficient. For this state of affairs, however, the Board of Trade and the Legislature are largely responsible by placing restrictions on the use of high-tension distributing lines, and thus making it impossible for large electric schemes to be undertaken. At the same time the early Electric Lighting Acts, by restricting private enterprise, forced local authorities, great and small, to put down their own individual plants. The report states that at present the supply of electricity in Great Britain is divided between 312 companies and 325 municipal undertakings. The average generating plant capacity of those undertakings which have power stations is 5,000 h.p., or about one-fourth of the capacity of one single generating machine of economical size, and about one-thirtieth of the size of what may be considered as an economical "power station unit." This haphazard multiplication of what are after all small generating plants, situated not at points where generation can be effected most cheaply, but in the middle of towns or other small restricted areas, renders it impossible, the Sub-Committee say, to obtain just those advantages which are peculiar to the generation and distribution of electrical power in regard to economy in coal, the use of waste coal, extraction of by products, &c.

In dealing with the advantages of centralised control the Committee draw a striking contrast between the methods of supplying current in two of the most important industrial areas in England, namely, Lancashire and the North-East Coast. The North-East Coast area, which is larger in extent and smaller in population, and, therefore, less advantageous from a power point of view than Lancashire, is served from a group of seven power companies with one interconnected electrical distribution system. In the Lancashire area, with its multiplicity of electrical undertakings, the price per unit for electric power varies from 1d. to 2d. or more, while the average price paid in the North-East Coast district is less than ½d. per unit and the use of electric power per head of the population is three times as great. Apart from the inter-linking of the distribution centres and the extensive use of waste heat, the outstanding feature of the North-East Coast system is the great demand which exists for power for industrial purposes in shipyards, engineering works and mines, and also for traction and lighting. On the Tyne the shipbuilders and engineers may be said to have adopted electricity to the exclusion of all other forms of motive power, while on the Wear shipbuilders have scrapped their own plants because they can obtain a cheaper supply of power from the companies. The area of supply is about 1,400 sq. miles and extends from Blyth in the north to Middlesbrough in the south. The complete system of interlinking makes a breakdown in the continuity of supply almost impossible, as in the case of failure at one station current can be transmitted through the main cables from some other generating station.

In view of the fact that the North-East Coast is so well served in its electrical supply, it may be of interest to inquire what is the position of affairs on the Clyde where the output of tonnage is larger than in any other district in the country. The densely populated Clyde area, with its extensive shipbuilding, engineering and mining industries, present an excellent field for development on the lines laid down in the report of the Sub-Committee. The public supplies of electricity in the district are in the hands of Glasgow Corporation, Greenock Corporation, the Clyde Valley Electrical Power

Company, and several municipal authorities. At present important extensions are being made at Glasgow where at one of the power stations three units of 30,000 h.p. are already on order and will be installed shortly. This particular station will ultimately have a capacity of 300,000 h.p., and will in fact be a super-station.

Although the difference between the prices charged for current in the Scottish area by the municipalities and the privately-owned companies is not very great, opinion is sharply divided on the question of whether the proposed super-power supply should be undertaken by public bodies or left to private enterprise. The advocates of municipal control say that privately-owned concerns are out to make as big dividends for their shareholders as possible, whereas municipal authorities, from their very nature, are there to serve the interests of the consumer, and these in the long run, it is contended, are the national interests. The Sub-Committee, on the other hand, are inclined to favour private enterprise. They are, they say, impressed with the special need for initiative and resource in the management of the business of power supply, and they are of opinion that the freedom of range and keenness which are distinctive of private enterprise will be found in a high degree conducive to the fullest measure of success. The proposed 16 great power authorities, whether private companies or public bodies, would be controlled by a National Board of Electricity Commissioners, and existing plants would be handed over on equitable terms to the new authorities. It is recognised, however, by all parties that whatever form of control is established greater efficiency is necessary, and that the existing artificial boundaries must be swept away, so that power stations irrespective of ownership shall feed on to a common system of cables. The present conflicting interests in the various districts must also be merged in such a way as to ensure the energetic carrying out of whatever process of reform is introduced.

PUBLICATIONS RECEIVED.

[*A short notice of any publication does not necessarily preclude the subsequent appearance of a longer review.*]

The Works Manager To-day. By Sidney Webb. London: Longmans, Green & Co., 39, Paternoster Row, E.C. 162 pages. $7\frac{1}{2}$ in. $\times$ $5\frac{1}{4}$ in. $\times$ $\frac{5}{8}$ in. Price 3s. 6d. net.

Whilst we may find ourselves in profound disagreement with the ideas of Mr. Sidney Webb, we cannot help reading his pronouncements with care and respect. Mr. Webb does not belong to the irresponsible section of socialist writers, but by the very sympathy and moderation of his views he wins us to a study of thoughts which otherwise we should probably deem beneath serious consideration. It is so in this book. Published as an address prepared for a series of private gatherings of works managers, the author puts before us his ideas as to the best way in which the works manager may succeed in obtaining the greatest efficiency and therefore the greatest output from his men. And lest it may be imagined that for once Mr. Webb is throwing aside his socialistic principles, let it be added that he believes and affirms that "the utmost productive efficiency of the establishment is, significantly enough, coincident with the utmost happiness and contentment of the operatives concerned," so that he is concerned with the problems of management not merely from the point of view of output, but because he is striving towards the attainment of the utmost happiness and contentment of the workers. We, too, are quite prepared to follow him along this path also, especially if at the same time it leads to an increase in output and to more efficient management.

Mr. Webb lays great stress on the importance of the functions of the works manager, and expresses the opinion that the profession of manager is destined with ever-increasing complication of man's enterprises to develop a steadily increasing technique and a more and more specialised vocational training of its own; and to secure, like the vocation of the engineer, the architect or the chemist, universal recognition as a specialised brain-working occupation. What are the functions of the works manager which the author rates so highly? The first and perhaps the sum of these is the function of handling human nature in conjunction with machinery and materials with a view to its perfect co-operation in an industrial enterprise; and that as a consequence the efficient manager is he who makes his industry efficient in quantity and quality of product in comparison with the human efforts and sacrifices involved. The concern of the works manager is thus primarily with output and not with profit. It must not, however, be thought that the author is content to generalise throughout the book, or indeed that he is indifferent to the question of profits, as might be inferred from the above quotation. In fact, after the first chapter, which deals with the function of management, he devotes his remaining 11 chapters to a detailed consideration of the separate difficult problems over which management is apt to stumble, and the first of these—no doubt it is the one which first exercises the young manager also—is reducing the cost of production; but he hastens to differentiate between a "genuine reduction of cost, that is to say, a reduction of the human efforts and sacrifices required per unit of output," and "merely a lowering of the rate of wages paid to the workmen." Similarly in dealing with other difficulties it is not the obvious solution which the industrial ferment of to-day shows to be the wrong one that is advocated, but a solution based upon a full measure of sympathy with the workers and a recognition above everything of the fact that they are human beings. This leads to many startling suggestions. Thus, in dealing with the subject of recognition of trade unions, the author suggests that the manager should always be prepared to deal with the officials of the men's unions. "For the management to refuse to allow the workmen to be accompanied or to be represented by their own chosen agent or adviser is exactly as if the workmen were to insist on coming face to face with the company's shareholders (for it is these who are their real employers) to the exclusion of the company's manager, secretary or solicitor."

Again, in a chapter entitled "The Management should have Nothing to do with the Rate of Wages." Mr. Webb instances the procedure in the cotton industry. The owner of a Lancashire cotton mill, or his manager, is not allowed to decide what wages he shall pay to any spinner or weaver in his employment. He must pay as a minimum, whether he likes it or not, according to the standard list of prices fixed for his district by the joint decision of the Employers' Association and the Trade Union; just as he must work as a maximum the hours prescribed by the Factory Act. But lest this may seem to be the abrogation of all that is desirable from the point of view of the management, it is confidently asserted that "the result is—and significantly enough this cannot be said of any British industry in which there is no observance of a standard rate—that in productive efficiency the Lancashire cotton mills lead the world."

Enough has been said to indicate the breadth and originality of outlook which Mr. Sidney Webb brings to bear upon the many knotty problems which are troubling the current of industrial progress at the present time. We would like to quote from the chapter on "Payment by Results," or from that on "Scientific Management and Welfare Work," but it will suffice to urge those of our readers who have to deal with the management of men to get the book and study it for themselves. Its style is dignified, its outlook lofty, and we believe that a closer recognition of the principles advocated will go far towards the elimination of that spirit of mistrust which is so prevalent in the workshops to-day.

TRADE PUBLICATIONS.

[*Copies of any of the publications mentioned in this section will be sent on application to the firms by which they are issued.*]

Modern Hydraulic Machinery (Tweddell's System). Sole makers, Fielding & Platt, Ltd., engineers, Gloucester, England.

We have received from Fielding & Platt an extremely well-got-up catalogue illustrating the various kinds of hydraulic machinery constructed by them. This firm are the sole makers of Tweddell's system of hydraulic machine tools, and in the list will be found many tools especially applicable to ship and marine boiler building. These tools include garboard benders for ship's strakes up to 30 ft. long; riveters, both portable and stationary, and flangers and benders for boiler work. In addition to these tools, the various forms of presses and punches are illustrated and described, together with tables giving the capacity and power of the various sizes of each type.

The firm also turn out a different class of machinery for use in docks and on shipboard, such as capstans, cranes, hoists, &c., and within its 219 pages the catalogue will be found to contain illustrations of all the various applications of hydraulic power. It is worthy of being mentioned that the catalogue is printed throughout in French as well as in English, thus rendering it available for

many buyers other than those in the British Empire. This is a step which indicates that British manufacturers are awakening to the importance of capturing foreign trade after the war, for it has long been advocated that in order to achieve this end catalogues must be published in the language of the country with which it is hoped to do business.

It is interesting to note that the firm claim to have already over 10,000 Tweddell's system hydraulic machines in everyday use.

LETTERS TO THE EDITOR.

[*The Editor does not hold himself responsible for opinions expressed by Correspondents.*]

THE LJUNGSTROM TURBO-ELECTRIC SYSTEM OF SHIP PROPULSION.

Norrkoping,
January 14, 1918.

TO THE EDITOR OF SHIPBUILDING AND SHIPPING RECORD.

In the edition of December 6 of your valued publication I found a very interesting article about the Ljungström turbo-electric system of ship propulsion.

After having read the article, I wish, however, to point out to you a very important fact regarding the comparative table relating to the consumption of the ss. *Mimer* and the ss. *Mjolner*.

This important fact is, that no remark has been made that the *Mimer* is *not* fitted with steam super-heating apparatus, nor forced draught, which is the case in the ss. *Mjolner*. The *Mimer* is using saturated steam only. In the ss. *Mjolner* even the hot air, generated around the electric generators, is used for combustion purposes.

I therefore think that the real gain, due exclusively to the Ljungström turbines, cannot be more than about 15 per cent., rather less than more, which, however, must be considered as a most satisfactory result of this Swedish invention.

VIKTOR SCHREIL,
Superintendent, Norrkopings Rederiaktiebolag, A.O.

NOTES ON WELDING SYSTEMS.*

When briefly describing the nature of the several processes it is proposed to group these under the distinctive classifications of smith welding and fusion welding.

SMITH WELDING.

(*a*) *Pure smith welding.*—This, the original method, the only one practical until recently, and then only on wrought iron and steel, consists in heating the parts to a temperature at which they are plastic, bringing together the surfaces to be united, and applying pressure by hammering or equivalent means. It depends upon the fact that clean surfaces of those metals unite under pressure at a correct temperature, and that there is a sufficient range of temperature during which they remain in a welding condition to permit of the necessary manipulation, and that the oxide formed by heating can be made to fuse at the welding temperature. The principal points to be observed are that the surfaces to be united shall be clean, the temperature within a certain range, and the hammering so applied as to bring the whole of the surfaces into intimate contact.

The cleanliness of the surface is secured by putting thereon some substance which will fuse, thus protecting the metal from oxidation and uniting with any oxide formed into a fluid slag or flux, which is expelled under the hammering, leaving the clean surfaces free to unite.

(*b*) *Resistance welding.*—Resistance welding is a form of electric welding, which is the closest approach to original smith welding. The surfaces to be united are approximately fitted, brought into close contact, and an electric current passed of sufficient strength to bring the surfaces to welding heat. Then pressure is applied to force them into contact and to extrude oxide, &c., as far as possible. The heat produced by the passage of the current is greater at the contact surfaces than in the solid metal, because the electric resistance, even of well-fitted surfaces, is much greater than a similar length of solid metal. The heat is, therefore, localised by this fact, and is further localised by using clamping electrodes of low resistance, which hold the work as nearly as possible to the weld. Owing to the rapidity of the heating, and the very small amount of air between the opposed surfaces, very little oxidation can occur. For resistance welding alternating current is always used to provide the necessary large current at a low voltage, which is most economically supplied from a transformer adjacent to the welding tool. The several methods of resistance welding are referred to hereunder :—

1. *Butt welding.*—This method is applicable to the welding of rods, bars, &c., transverse to the length of the pieces. The pieces to be united are brought together end on, held in proper clamps connected to, or forming part of, the transformer low-pressure winding ; the current is switched on, and end pressure applied by ratchet or hydraulic gear as soon as the ends are sufficiently heated. The pressure and current are maintained until a distinct burr is formed round the weld, showing that an appreciable amount of plastic flow has taken place, and that there is little likelihood of any oxide which may have been formed remaining in a continuous formation to weaken the weld. This weld is in most cases hammered whilst cooling.

2. *Spot welding* is most commonly adopted in this country to unite sheets or thin plates where a continuous weld or joint is not required. The two sheets are placed between electrode clamps which press them together, current is then switched on, the surfaces in contact brought up to welding heat, and the pressure maintained after current is off until sufficient cooling occurs. The sheets are then moved on to the next spot to be welded, and the operation repeated. Work so welded is therefore united by a line of small welds, and may be compared to flush riveted work. Further developments of this method comprise the uniting of much thicker steel plates, such as constitute the hull of a ship, and experimental work of this nature is now being carried out in America with a view to substituting spot welding for riveting. To make up material displaced under heat and pressure, which might result in perforation with excessive current, snap heads are sometimes applied to the side of the plate, these forming part of the homogeneous weld.

3. *Seam welding* is an extension of spot welding, applicable to comparatively thin sheet work. The electrodes are rollers through which the two sheets are passed when current is applied and the rollers revolved. The electric current heats up the sheets to welding point as they pass between the rollers, and they are thus united along the whole of the roller path. This continuous seam joint is stronger than spot welding, is fluid tight, and is comparatively rapid, as it is continuous. The surfaces to be joined must be absolutely clean, either sand-blasted or pickled with acid.

(*c*) *Water gas.*—This is a development of fire or smith welding, and has been used for making large tubes. The gas, being composed of a mixture of hydrogen and carbon monoxide produced by passing steam over red-hot coke, is comparatively cheap, and when burnt with oxygen or air gives a very clean flame. By means of a blow-pipe or combination of twers, the edges to be joined are raised to a welding heat, and the weld completed by following up this heating with rollers or a pneumatic hammer. The system is obviously suitable for long welds, such as tubes and shells, in place of fire heating. Water gas is also used in blow-pipes for fusion processes.

FUSION WELDING.

In the fusion method the edges or surfaces of the pieces to be joined are raised to fusing point. Very generally fused metal is added of composition similar to the work, so that new and old metal are amalgamated to an approximately homogeneous mass. Both flame and electric methods of heating are employed. Fusion welding should properly be classed as autogenous soldering.

* Abstract of Paper read before the Institution of Engineers and Shipbuilders in Scotland, January 22, by Captain James Caldwell, M.I.E.E., R.E.

Before referring to the principle and action of the flame blow-pipe mention should be made of the successful commercial process of manufacturing oxygen by means of the liquid air system developed by Prof. Linde, of Munich, which has enabled the British Oxygen Company in this country to provide the necessary supplies for cutting, welding, and medical purposes. It may well be said of the cutting and welding blow-pipe that it has proved itself to be one of the most important labour-saving devices of the present time.

(*a*) *Flame blow-pipe.*—All the flame blow-pipes in practical use consist of arrangements for producing a jet of flame of regular form and size and directing it upon the work. These arrangements include means for regulating the proportions of a combustible gas and oxygen (or air), mixing the two gases and projecting them as a flame upon the work to be heated.

For welding, the flame and products of combustion in contact with the heated metal should have a chemical reducing or neutral character. For cutting, not now under consideration, a separate jet of oxygen accompanies the flame jet. There must, therefore, be some means of regulating the proportions of the gases for this purpose, as well as of securing economy in consumption. To secure good combustion, the two gases must be thoroughly mixed, so that a mixing chamber in some form has to be provided. Lastly, the velocity of exit of the gases through the jet nozzle must be a little in excess of the velocity of flame propagation in the mixture, otherwise the gases would fire back and burn in the mixing chamber.

Regularity of form and shape of the flame is essential to good work, evidently to permit of accurate manipulation, also because different parts of the flame have different temperatures and chemical characteristics, and an unsteady and ragged flame is a defective tool. For good welding, the hottest part of the flame, which is also composed of neutral or reducing gases, is, so to speak, the edge of the tool, and does the essential part of the work, excepting when welding cast iron, when the greatest care has to be observed in preventing porosity due to the liquid state of the metal.

1. *Oxy-acetylene.*—By far the most extensively used welding blow-pipe method is oxy-acetylene. Acetylene and oxygen in equal volumes—in practice a little more oxygen than acetylene is always used—produce a flame with an inner core which has a temperature of about 4,000° Fahr. This core is white, and consists of hydrogen and carbon monoxide, both of which are reducing gases.

This reducing character of the hot core and the surrounding jacket of gas is a very important element in the success of the oxy-acetylene process. The white core indicates with great precision the correct admixture of gases, as well as the most useful part of the flame, and is therefore a most serviceable guide to the operator. The blow-pipe must be suited to the pressure condition, but the actual delivery pressure from the nozzle should be such that the exit velocity of the gases is very little above the flame propagation velocity in the mixture, which is about 330 ft. per second.

Acetylene as locally generated always contains impurities of which sulphuretted and phosphoretted hydrogen are the most objectionable. A purifier capable of removing these impurities is therefore necessary for good welding, as all hot metals pick up sulphur from the flame with some damage to their mechanical properties, and most metals also pick up phosphorus, which is particularly damaging to the ferrous metals.

For welding with the blow-pipe, using acetylene or other combustible, the edges of the metal to be joined are laid together, bevelled off, so that the two edges form a V-shaped trough, the wider part being towards the operator. Commencing at the narrow or bottom part of the trough, the edges are fused with the flame, and new metal at the same time fused and run in, so that it unites with the metal of the edges. For a good weld, the fusion must commence from below, and be carried gradually upwards to the surface, care being taken that no new metal is added until the original edges are at fusing point, and that successive additions of new metal amalgamate thoroughly with each other and the original piece.

If the joint is made between overlapping sheets or plates, such as lapped plates in boilers, the upper part (landing edge) should be chamfered and the fusing process begun at the line of contact between this edge and the underlying part. New metal is run in, the fusion extended on either side, so that the new metal joins up with both parts. In such work union is effected, and the strength of the joint depends on the fillet of new metal. No material fusing or welding together of the overlapping parts is practicable.

2. *Oxy-hydrogen.*—The temperature of the flame with oxygen is high, but not nearly so high as that of oxy-acetylene, although the flame is larger for the same energy output, owing to the lightness of hydrogen. The flame being larger or more diffused, it is therefore less suited to heating along a sharply-defined line, and neighbouring material is relatively more heated. For certain work this larger flame and greater diffusion of heat is an advantage, and is no doubt the reason why water gas, which is largely hydrogen, is used for tube welding, as already described.

Hydrogen is usually supplied in steel bottles or cylinders under high pressure, like oxygen, so that a mixing form of blow-pipe is generally employed. The appearance of the flame is a fairly good guide to the proportions of the two gases, but the flame being very slightly luminous, almost invisible in strong daylight, it is not so easy to adjust the mixture or to select the best part of the flame for the work, as in the case of acetylene. To produce, hydrogen itself is a good deal more expensive than acetylene, although more economical processes for producing it have recently been put into commercial use, and are being developed; in fact, the gas now forms a non-productive by-product of certain industries.

A disadvantage of oxy-hydrogen for welding work is that the water vapour produced by combustion oxidises some fused metals, especially iron. It is, therefore, necessary to use an excess of hydrogen over the proportion required for complete combustion, in order to mitigate this oxidation, and in practice about twice the theoretical quantity of hydrogen, *i.e.*, four times the volume of oxygen has to be used. This necessarily means a cooler flame, and a more expensive one.

The flame, with these proportions, resembles the acetylene flame in having a core of high temperature, surrounded by a jacket of combustion products, of which the excess hydrogen burns when in contact with the air. Also, as the oxidising character of the water vapour in the jacket is only diminished—not neutralised—by the excess hydrogen, there is a liability to oxidise the hot metal with which it is in contact whilst the acetylene flame is practically free from this disadvantage.

As regards effect and cost, equal volumes of hydrogen and acetylene give out heat energy in the proportions of 88 to 410 when completely consumed with oxygen. At pre-war prices the cost of hydrogen for the same amount of heat (number of calories) is about double that of acetylene. The lower temperature of the flame and the greater diffusion of the high temperature zone limit the maximum thickness of parts which can be welded with hydrogen, to something much smaller than can be dealt with by acetylene.

Nevertheless the oxy-hydrogen blow-pipe has its advocates, and for work with the more fusible metals the advantages in comfort and observation of the work may outweigh the disadvantages.

3. *Oxy-coal gas.*—Coal gas and oxygen produce a blow-pipe flame which has considerable resemblance to the hydrogen flame. The products of complete combustion are carbon dioxide and water vapour, both of which are oxidising gases. Therefore, in order to obtain a reducing flame there should be some excess of coal gas, and the core of the flame only used for the fusion of the metal. This is rather a theoretical deduction than a statement of practice, the fact being that oxy-coal-gas welding has been very little used, acetylene having proved easily superior, and coal gas practice has not developed. The flame temperature is about the same as that of oxy-hydrogen.

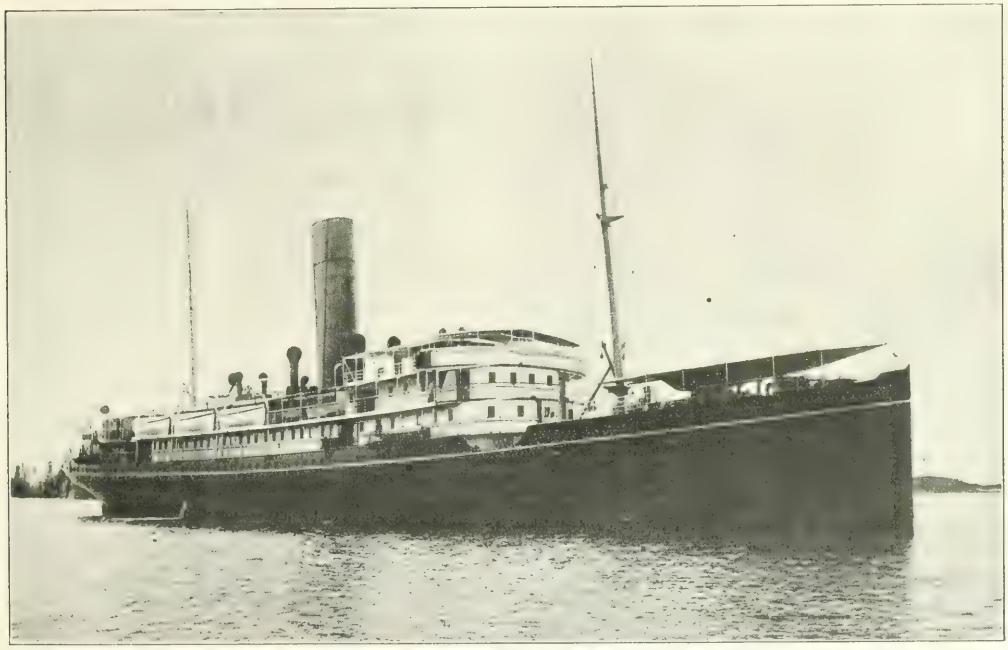
(*To be continued.*)

WATER-TUBE BOILERS FOR MERCHANT SHIPS.

With very few exceptions, the water-tube boiler has been thought by naval architects to be unsuitable for merchant vessels, especially for vessels of the purely cargo or "tramp" type, although it is understood that this opinion has lately been modified to a considerable extent. Before the war there was a tendency towards installing this type of boiler in vessels of the fast cross-channel type, and one or two vessels had actually been completed, and cargo vessels, fitted with water-tube boilers, are now being built in this country. It will be remembered that a short time ago we drew attention to the fact that the Luckenbach Steamship Company of New York were fitting the later vessels of their fleet with water-tube boilers supplying steam to geared turbines, and we now learn from the superintendent of the company that these boilers have been specially designed with a view to being not too sensitive, and sufficiently rugged to stand the customary ocean service. The drums, tubes and water spaces are made larger than is usual with water-tube boilers, and the drums are of sufficient size to enable them to steam for 15 minutes or more without the addition of feed water. Comparative information as to the relative performance of these boilers with fire-tube boilers in vessels of the same class is not yet available, but it will be awaited with interest.

The Mined Steamer "Osmanieh."

The Mercantile Fleet Auxiliary steel twin-screw steamer *Osmanieh*, of which we give an illustration, was sunk by striking a mine in the Eastern Mediterranean on December 31 last. The losses totalled 199, including Lieut.-Commander D. R. Mason, R.N.R., in command, and eight female nurses. She was the largest vessel of the Khedivial Mail Steamship & Graving Dock Company, Ltd., of 4,041 tons gross, and built in 1906 by Swan, Hunter & Wigham Richardson, Ltd. Her speed was 18 knots.



The "Osmanieh." Sunk by a Mine in the Mediterranean.

THE STATE AS SHIPOWNER.

The Liverpool Steam Ship Owners' Association's Report.

The annual report of the Liverpool Steam Ship Owners' Association, which was presented at the annual general meeting last Monday, critically examined the shipping position as it existed just after the outbreak of war and as it exists to-day. The report discusses the paralysing influence of State control not only as regards management but also through delaying replacement and because of the absence of the driving power on which depends the existence of individual enterprise. It is pointed out that during the first 18 months of the war, from August, 1914, to February, 1916, the nation depended, in the main, for its oversea supplies on the enterprise and exertions of the individual traders and shipowners; and its supplies of all essentials were maintained, although from one-fifth to one-fourth of the ocean carrying ships had to be devoted to war services. During the next 12 months, from February, 1916, to February, 1917, the employment of the ships was limited to voyages approved by the Government, but the management of the ships on such voyages was left in the hands of the shipowners, and the cargoes carried on those voyages were, in the main, provided by the traders; and again, the nation's supplies of all essentials were maintained, although more of the carrying ships had to be devoted to war services and material help had to be given to our Allies.

As the carrying power available decreased, the hardships incident to unrestricted competition increased. In these circumstances the choice open to the nation were: First, to continue to leave each individual free to get (within the total carrying capacity of the ship and his own individual purchasing power) everything he wanted and could get by competition through prices and freights. Secondly, to leave such freedom to each individual, but to limit his choice to the imports which the State determined were essential. Thirdly, to purchase abroad on account of the State all such imports as were

essential and could be carried by the ships, and to leave the Government to organise the equitable distribution of such imports amongst the individual consumers.

Restricted Imports.

The obvious course, or so it seemed to the Association, was for the nation to determine what classes of imports it could best do without. The shipowners had neither the knowledge nor the authority to pick and choose between the cargoes to be carried. Further, if the total volume of imports to be carried were brought below the total carrying power available, then competition would tell against the shipowners and for the consumers. The shipowners' profits would in that event depend on the success of their own exertions in bringing in the greatest possible number of the permitted cargoes, and not on advances in freights resulting from a short supply of tonnage. During 1917, the policy of prohibition was applied to imports of which we had been accustomed to bring in about 10,000,000 tons weight in the year. The classes of imports prohibited are in the main those suggested by the Association in 1915, but the Government has not left to the individual consumer, and to the traders who serve their needs, freedom to compete for the permitted classes, nor has it left freedom to the shipowners to carry the greatest possible volume of such imports.

The third policy, that is, that the State should purchase abroad and ship, and distribute in this country, all essential imports, was during 1917 adopted in part. The purchasing presents the fewest difficulties, as the Government is using the credit of the State to its utmost. The organisation of distribution presents the most difficulties, but although it is clearly a matter which can only be regulated by officials of the State, progress has been exceedingly slow. The success or failure of the steps taken become immediately apparent, and the direct responsibility rests on the officials concerned. Under such circumstances there is hesitation in the trying of experiments. The intermediate step, that of the transport of the supplies to this country, is the one on which the Government and its officials can give the least help, but it is the one upon which they show the greatest readiness to try experiments.

Gambling with Carrying Power.

On its formation, the present Government determined to requisition all British ocean-going steamships, and it did so for the purpose of securing the whole of the profits to be made from the freights over and above the Blue Book rates paid, on a time basis, for the use of the ships. In determining on this course, the Government did not give one moment's thought to the manner in which the ships were to be managed, although it was clear that not only the profits to be secured by the Exchequer, but also, what was of far greater importance, the oversea supplies of the nation were in very great measure dependent on the efficient management of the ships, that was on the number of voyages made. The State had no organisation either in this country or abroad capable of undertaking this management, and therefore the Shipping Controller had to appeal to the shipowners to carry on their own businesses with the ships which the Government had gone through the form of seizing. The terms offered were: first, that the shipowner should be paid for the hire of his ship rates which had been fixed in 1914, and which, according to the Chancellor of the Exchequer were by reason of the great increase in operating charges then below the pre-war rates of earnings; second, that all established steamship lines should maintain at home and abroad their organisations, being reimbursed the actual net cost of maintaining the same; third, that with such organisations the established lines should run for the profit of the State their own and any other vessels entrusted to their care; and fourth, that in the event of a vessel being lost through a war peril, the shipowners should receive by way of compensation a sum which represents, on the average, about two-thirds the cost of replacement. The Government was not content to eliminate individual responsibility and individual enterprise from the management of the ships, it went further and prohibited the shipowners from building. Under the belief that vessels could be built faster under official supervision, it entered upon a big programme for the building of tramp tonnage, which it described as "standard ships."

The Government's policy in regard to shipping was entirely opposed to that which it adopted in dealing with all other interests. In the shipbuilding yards, and in the munition works, every effort has been made to get the men to accept piece rates of pay, but the Government forced the shipowners to accept time rates for the use of their ships. In dealing with agriculture, the Government guaranteed prices over a term of years; but the shipowners were called upon to abandon trades which had been established, at heavy cost, by years of work, and they were prohibited from building to maintain their fleets in such a condition as would give them a chance of re-establishing their position in these trades when peace is restored.

Although the policy of general requisition was imposed solely for the purpose of seizing the earnings of the shipowners' business, the machinery adopted placed under official control the cargoes to be carried, the sources from which they were obtained, and the destinations to which they were sent. The shipowners and the traders, as well as the consumers, were placed in the hands of officials who were unable to devise any solution of the real problem, namely, that of the equitable distribution of the imports amongst the consumers.

Conflicting Interests.

The peril of concentration of control over cargoes and carrying power in the hands of the officials, is the loss of driving power. The carrying power having been hired by the State at a time rate, each Department considers that it is entitled to use that power in the manner which will best facilitate the performance of the particular duties imposed upon it. To give some examples: the Admiralty is responsible for the protection of the ships, and judges its success inversely by the number of vessels lost; but the loss of time, that is of voyages and consequently of the cargoes carried on those voyages, is almost as disastrous. If under peace conditions 100 ships in a particular trade can make eight round voyages in the year, and if that number be reduced to six owing to the system of protection adopted, there will be a loss of 200 cargoes, even if every ship is protected on every voyage, and that loss (for the time being) will be as disastrous as the loss of 25 ships. But the ships are the State's, and to the Admiralty time does not appear of any moment. The Wheat Commission increased largely the importation of wheat last summer, and to that end concentrated the ships on particular trades; but at that time the Admiralty were not ready to protect adequately the routes on which the ships were employed and in consequence the losses were exceedingly heavy. To the Wheat Commission the ships could not be better employed than in the discharge of the special duties imposed on that Commission, and accordingly, as they were the State's, they were so employed, regardless of the consequences. If the Ministry of Food has to distribute bacon amongst the retail dealers the machinery nearest at hand is the ships from which the bacon is discharged, and the quays on which it is landed, and that machinery, as it is the State's, is used without regard to the detention of the ship. If the War Office want timber, or hemp, or jute, or anything else, it insists, as the ships belong to the State, on their being discharged as best suits the convenience of the particular Department charged with the duty of receiving and distributing those articles. And it is the same with the Ministry of Munitions, and all the other Ministries, Commissions, and Committees. Their attitude is that the ships are the State's. They are acting for the State. May they not use State property in the manner in which they believe the particular interests of the State which are entrusted to their care will be best served? They cannot understand, or they will not recognise, that delay to the ships is paid for by loss of carrying power—that is, by a lessening of the total volume of our overseas supplies. Many of these delays are trifling in themselves, but their cumulative effect is most serious. They can be prevented, in great measure, if the ships be managed as a separate interest, worked with the sole aim of obtaining the maximum number of voyages, and therefore the

maximum number of cargoes. The Departments, the Commissions, and the Committees charged with the shipment or the receiving of the cargoes, each fights for its own hand without regard to the interests of the others. Shipping in the hands of the State is the servant of all the Departments, Commissioners, and Committees, and the master of none, and waste which has not to be paid for directly in cash is ignored by them one and all. The Shipping Controller, and the officials of the Ministry of Shipping, and the Advisory Committees they have called in to their assistance have to administer a policy which is fundamentally bad.

The Shipowners' Services.

When the Government requisitioned the ships in order to seize the profits, it was open to the shipowners to hand over the vessels in return for the time rates of hire, and to leave the Government to run the ships; but to have done so would have meant starvation to the country, and the loss of the war. Under these circumstances the shipowners placed their services at the disposal of the nation, and have since done their utmost to minimise the waste of carrying power which is inherent to State control.

In addition to enforcing the prohibition of the less essential imports, and of placing the ships under the direct control of the officials, the Government during the year took steps towards facilitating the flow of traffic through the ports. More men of the Home Defence Army have been made available, through the Transport Workers Battalions, to supplement proved deficiencies in civilian labour, and the system of pooling the trucks of the railway companies has been improved. These are points for which the Association has been working since 1914, and upon these points the action of the Government has helped materially in increasing the carrying power of the ships.

Loss of Carrying Power.

It is not possible to state exactly the effect as a whole of the Government's action, as since the beginning of the year, no figures have been published showing either the weight of the imports, or the manner in which the ships have been employed. Such figures as are given from time to time to Parliament, are supplied by Departments charged with particular duties, and from such information as the Association possesses it would appear that all of these Departments take very sanguine views of the success which has attended, or is likely to attend, their efforts. Beyond question there has been a very substantial fall in the total weight of the imports. There is grave ground for believing that there has been a loss of carrying power very considerably in excess of the actual loss of ships, and that this has been caused by loss of time on the voyages made. This loss of carrying power is the more serious having regard to the fact that during the year shipping has been concentrated on the short voyages trade, in which the increase in the number of voyages of the ships employed should have far more than made good the loss of the voyages of the ships destroyed by the enemy. Prices, except where they have been paid in part out of State funds, have advanced. Freights on exports, and on all imports other than Government cargoes have advanced. The cost of running the ships has increased.

The Association does not question the right of the Government to determine on behalf of the nation the number of ships to be devoted to naval and military services; the carrying power to be given up to assist the Allies; the essential imports to be brought into this country; and how best to secure and distribute such imports. It recognises that organisation and centralisation of control over such matters are needed. But what the Association does claim is that in all matters relating to the actual working of the ships, the shipowner must be trusted, and not hampered by official orders and directions. During the last 12 months State intervention has led to waste of time and therefore to loss of carrying power and of imports.

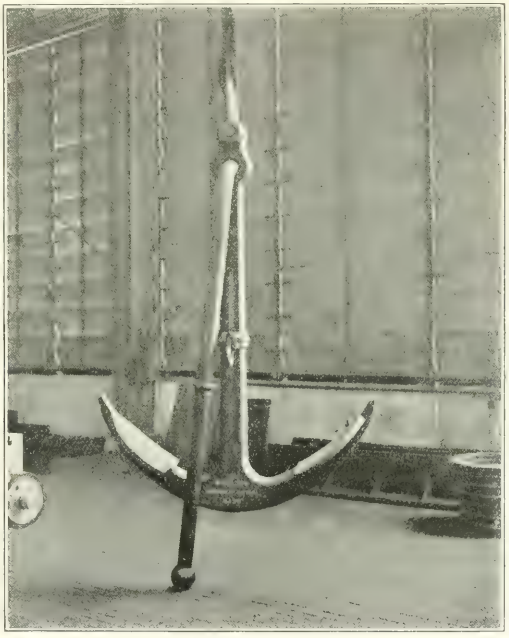
Definite figures are not yet available, but the probabilities are that the Exchequer is getting substantially less from the receipt of the whole of the earnings of the shipowners' businesses under State control, than it would have received from the shipowners in income tax and excess profits duty if those businesses had remained under their own control.

CLYDE STEAMSHIP OWNERS' ASSOCIATION.

Proposed Revision of Blue Book Rates.

The annual general meeting of the Clyde Steamship Owners' Association was held in Glasgow on Monday. Mr. T. Paterson Purdie, president, occupied the chair, and in the course of his address dealt with the present position of the British Mercantile Marine.

The annual report of the Association, which was submitted, dealt mainly with legislation affecting shipping during the year, and the negotiations which have been carried on by the Association. There were, it was stated, 508 vessels entered in the Association during the year, with a total tonnage of 1,140,837 tons, being a decrease of 63 vessels and of 142,098 tons compared with 1916. The subject of Blue Book Rates of hire on requisitioned cargo steamers received a good deal of attention during the period under review. The rates, the report states, inaugurated in October, 1914, and not increased since March, 1915, have, owing to the abnormal increases in owners' working expenses, consequent upon war conditions, been found to be totally inadequate. Representations have been made from time to time to the Shipping Controller by the Association, and in compliance with his request comparative accounts were submitted from members owning various types of cargo steamers, as well as oil tankers, showing how adversely the Blue Book Rates operated. The Chamber of Shipping also took up the matter which was being



A Balboa Anchor.

The anchor illustrated herewith was made in the foundry at the Balboa workshops in connection with the Panama Canal. These workshops were founded about the middle of 1915, and are capable of undertaking extensive overhauls and repairs. The Dry Dock at Balboa is 1,000 feet long.

investigated at present. In the meantime Mr. Purdie, president of the Association has submitted the following points for consideration by the special Committee appointed by the Chamber of Shipping in its coming negotiations with the Shipping Controller :—

(1) Repayment to owners of war risks calls paid by them on requisition vessels up till August 19, 1917.

(2) Payment of continuous hire on requisitioned vessels while fitting out with armaments, or wireless, or when undergoing damage repairs arising from accidents attributable to war conditions.

(3) Payment for fitting special accommodation, wages, and provisions of wireless operators, and for all costs of installing wireless, as well as additional costs for life boats and other equipment owing to increase of crew by wireless operators and gunners.

(4) That the Blue Book Rates of hire be based on the increased gross tonnage of shelter deckers altered at the Government's request, and be continued while vessel undergoing necessary alterations.

(5) That all these items are additional and extraneous to the owners' liability for working expenses which formed the basis of the Blue Book Rates instituted in 1914, and that accordingly they are each and all purely and simply for account of the Government who, being liable for war risks, are similarly liable for the costs of all measures undertaken for the protection of property.

(6) That the Blue Book Rates be retrospectively increased commensurate with the increase in owners' working expenses, so as to place owners on the same basis as when the Blue Book Rates were arranged, or, alternatively, that owners be paid the increased expenses on the same footing as the Government has all along dealt with wages.

Remuneration of Shipowners.

Mr. Purdie, in moving approval of the annual report, said the entire British mercantile marine continued to be worked under the control of the Ministry of Shipping at pre-war rates of hire—commonly known as Blue Book Rates—notwithstanding the abnormal increases attributable to war conditions in owners' working expenses, so that nearly all types of ocean cargo steamships have been constantly engaged in National Service without profit, and, in many cases, at an actual loss per day and every day, throughout the past year. No other trade has been treated in the same exceptionally drastic way, and moreover, the shipping trade was singled out alone under the Finance Act of 1917 and the rights of "averaging" which all other trades have the privilege of doing, was denied to it. The allowance of 4 per cent. for depreciation is totally inadequate on shipping which is an exhausting commodity, soon obsolete. The standard allowance of profit on new shipping is likewise altogether inadequate, and acts prejudicially to the rebuilding of our mercantile marine which is such a clamant necessity. The position accordingly is that the shipping trade is working at pre-war rates of hire, but is bearing and paying war-time expenses for the benefit of the Empire and its Allies. Since the Government took over complete control of the mercantile marine, freights have been raised in order to meet the increase in these particular items of working expenses borne by the Government—as apart from owners' expenses. All these freights are received, accounted for and paid to the Government, and out of the balance, the shipowner is remunerated on the scale of Blue Book Rates of Hire fixed in October, 1914, owners paying the various items of working expenses for which they are liable, and which, as he had already stated, exceed in some instances the amount of the hire. And yet shipowners continue to be assailed as profiteers because freights are higher and commodities substantially dearer, in consequence of shrinkage of supplies, higher prices in countries of origin, lack of tonnage and other causes incidental to war conditions, while, all the time, shipowners are only employed as a medium for collecting and handing over the freights to the Government for the National benefit. The mercantile marine, built up solely by private enterprise and public investment was one of our National saviours when this great war was suddenly thrust upon us, and the finest and latest types of merchant ships were immediately available and utilized as auxiliaries without which our Sea and Land Forces would have been incapable of effective action. That being so, it behoves our Government as a cardinal duty to do everything that is possible to assist and encourage the shipping trade.

The report was adopted, and office-bearers were elected for the ensuing year.

IRON ORE IMPORTS AT GLASGOW.

The Speeding-up of Discharge.

A conference of representatives of all the interests concerned in the import, conveyance and receiving of iron ore was held in Glasgow last week under the auspices of the Ministry of Munitions, for the purpose of considering what measures should be taken for further expediting the discharge and conveyance of the ore. A very satisfactory rate of discharge has been reached, but it is felt that the maximum effort has not yet been made. Among the interests represented were the following :—The Munitions Oversea Transport, the Port and Transit Executive Committee, the Clyde Navigation Trust, Greenock Harbour Trust, Ayr Harbour Trust, Irvine Harbour Trust, Ardrossan Harbour Trust, Shipowners and Dock Labour Employers' Organisation, Scottish Union of Dock Labourers, railway companies and iron and steel manufacturers.

Mr. Fred Lobnitz, Director of Munitions in Scotland, who presided at the commencement of the proceedings, said they all knew there was nothing more important than transport. Their object in Glasgow must be to be in the very forefront of all the ports as regarded the quick turning round of the means of transport.

Mr. Burton Chadwick, Director of Munitions Overseas Transport, who afterwards took the chair, said it was the function of Sir Joseph Maclay, Controller of Shipping, to bring into their ports the material required, and it was their duty to strain every nerve, to exhaust every expedient, and to adopt every device in order that they might take delivery of their goods and return the ship to him with the least delay. Glasgow during the past year had done wonderfully well in the matter of speeding-up the discharge of iron ore, and the improvement in the time occupied by ships in the port of Glasgow showed a startling figure. The position was so encouraging that he felt that Glasgow could do more. It must be remembered that not only did the effect of such improvement operate in Glasgow, it also had the very greatest effect on the other ports in the country.

Colonel Hawkins expressed the belief that the conference would have good results. There were two ways in which the supplies could be increased. One was by building more ships and the other was by making more use of the ships we had. This latter alternative could only be secured by turning round the ships more quickly at the ports at which they called, or in other words by getting more voyages out of them in a given time. Under the existing arrangements, if vessels were taking rather longer at sea the delay must be made up for by a quicker discharge in the ports.

Mr. Charles H. Lake, Munitions Transport Officer for Scotland, gave an account of the progress which had been made in speeding-up the discharge of ore cargoes since 1915. It was of interest to note, he said, that whereas the average rate of discharge of iron ore at Glasgow during the period from June to December, 1916, was 404 tons per boat per day, the average rate of discharge during the period from July to December, 1917, was 1,014 tons per boat per day. The average for Great Britain during the latter half of 1917 stood at 745 tons. At Glasgow a 5,000-ton boat took 15 days to discharge in December, 1915. In July, 1916, the average number of days had been reduced to 8·13, while from July to December, 1917, a further reduction to 4·3 days had been effected. At Ardrossan the rate of discharge during the latter half of 1917 was 473 tons per boat per day, while at Ayr during the same period the average was 688 tons. In order to effect this satisfactory result various measures had to be adopted. A shortage of civilian labour at the docks in

May, 1916, rendered it necessary to introduce the Transport Workers Battalion, and this was done with the full consent and goodwill of the Dock Labourers' Union. Towards the end of 1916 authority was given to the Munitions Transport Officer to divert any iron ore ships to any dock in Glasgow harbour if by doing so the discharge of the vessel could be speeded up. Later he received authority to divert boats from Glasgow to any port in the estuary of the Clyde, provided that the consent of the ship's agent was first obtained. This authority had been fully exercised from time to time. Another circumstance which had helped the speeding-up process was the change over of the iron ore workers' rates from a time basis to a piece-work basis. In order to expedite the return of wagons to the docks labour was provided for the discharge of the wagons at the iron works, while at the same time the system of "common user" was established for certain classes of railway wagons. A considerable speeding-up was also effected by the fixing of the principle of night working to the fullest extent.

A discussion then ensued on a number of points connected with the discharge of vessels, the conveyance of iron ore to works, and the discharge of wagons at works. Various suggestions were made with respect to possible improvements in the methods of working in connection with labour, mechanical appliances, works organisation and transit by the railways.

The meeting also discussed the question of providing suitable appliances at the docks for the rapid discharge of ore. In this connection it was pointed out by the representatives of the Clyde Navigation Trust that the trustees were doing all in their power to meet the wishes of the Ministry in connection with the matter. He was satisfied that the cranes, grabs and other appliances provided at the docks were ample for the work required, if a sufficient supply of labour was provided. If the Ministry had any suggestions to make for the further speeding-up of discharging of vessels the trustees would be willing, if possible, to give effect to them.

With regard to the transit of ore over the railways, it was suggested that a better service of wagons might be provided by the various companies. Among other questions discussed were the payment of bonuses to workmen and the payment of men on a piece-work basis.

LIGHTS ON BRITISH MERCHANT VESSELS.

In exercise of the powers conferred by the Defence of the Realm Regulations, the Lords Commissioners of the Admiralty have made the following Order, dated January 16, 1918:—

1. No light of any description shall be exposed in any British merchant vessel so as to be visible outboard, or as to reflect upwards, and if any master, officer, member of the crew or passenger, or any other person on board, so exposes or permits to be exposed any light, he shall be guilty of an offence against these Regulations.

Provided that this Order shall not apply to such navigation lights as the Admiralty instructions may authorise to be shown at any particular time or in any particular place or circumstances, nor to any lights that are necessary for authorised signalling purposes.

2. It shall be the duty of the owner of every such vessel to provide adequate means of screening lights on board, and it shall be the duty of the master or of such other member of the crew as he may appoint to take measures to secure that lights on board are screened as this Order requires, and if any of the said persons fail to perform his said duty he shall be guilty of an offence against these Regulations.

3. Any naval officer whom the senior naval officer of the port may appoint for the purpose may board any such vessel entering the port to inspect the means provided for screening lights as this Order requires. The master of such vessel shall give facilities for such inspection, and shall, if the inspecting officer so requires, sign a certificate to the effect that adequate means of screening lights are provided on board.

CONCRETE VESSELS IN DENMARK AND NORWAY.

The Danish firm of Bagger Sorensen & Gleerup Moller contemplates the erection of a large yard for concrete vessels at Norre Sundby. The company has a capital of £83,000 to £110,000, and has acquired the right to work under the Norwegian patents of the Porsgrund Cementstoperi. Lighters are to be built first and then sea-going vessels of 1,000 tons, with two motors. In Norway slipways are to be built on the site recently purchased by the Porsgrund Cementstoperi for the construction of cement vessels up to 4,000 tons. It is hoped to commence such vessels this summer. The company has raised its capital from £16,600 to £55,000, and has licensed the Alfens patents to three new Norwegian companies and to two Swedish companies, in addition to its Danish and English negotiations. A new company established at Arendal, with £44,000 to £55,000 capital, is to build vessels on the Norwegian system and principally of 1,000 tons. The terms of the licence are said to be £5,500 cash payment and 3 per cent. on the gross sale price of the hull.

SHIPBUILDING DEVELOPMENTS IN AUSTRALIA.

His Majesty's Trade Commissioner in Australia, writing with reference to the proposed development of shipbuilding in the Commonwealth, states that, in the course of a speech recently delivered at Sydney, the Federal Prime Minister stated that it was proposed to build vessels in Queensland, New South Wales, Victoria and Tasmania. As far as possible, the material to be used would be obtained in Australia, and practically all the machinery, &c., would be made in the Commonwealth.

The proposals made to the Trade Unions regarding piece work, continuity and dilution of labour, have apparently met with success. It was hoped, therefore, that the work would shortly be commenced.

The Prime Minister also mentioned that 14 ships were being built in the United States for the Commonwealth Government. Others would, it was stated, follow rapidly. The ships were to be employed in the removal of the vast accumulation of wheat. The Government had detached seven large vessels aggregating 50,000 tons from the Australian coasting service, and had placed them at the disposal of the Imperial Government.

The Trans-Continental railway was now in operation, and it was said that the Commonwealth Railways Commissioner had been approached with a view to utilising the line for the transport of goods from the Eastern States to Western Australia.

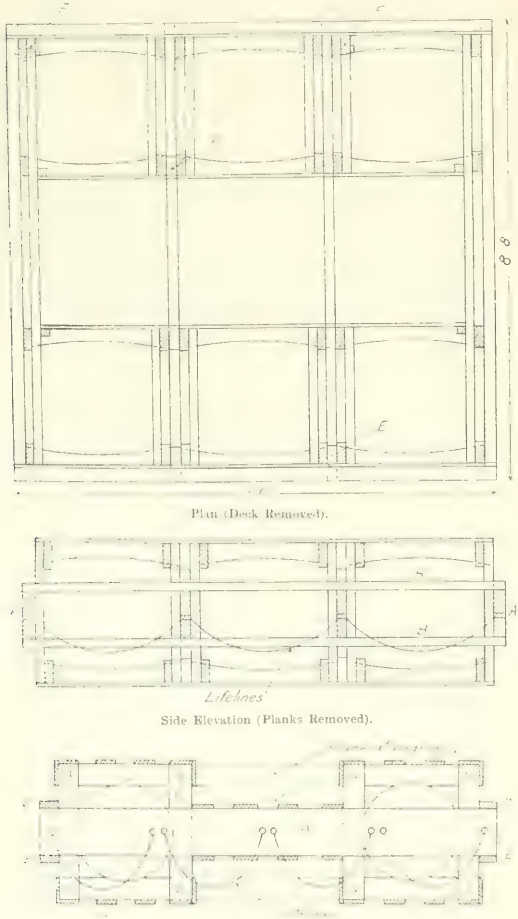
His Majesty's Trade Commissioner further adds that, in view of the withdrawal of tonnage from the Australian coast, it appears probable that developments along the lines suggested may take place. The matter, however, will involve an adjustment of railway freight rates between the Victorian, South Australian, West Australian and Federal Governments.

Serbian Commercial Men.—The Serbian delegation of commercial men which visited Liverpool in the latter part of last week made a tour of inspection over the Liverpool Docks and several large industrial works in the district, including Lever Bros., Port Sunlight; Cammell Lairds, Birkenhead; the works of the United Alkali Company at Widnes; the Booth Cold Storage Company; and Rigby's Flour Mills, at the Waterloo Dock. Lieut.-Col. H. D. Behrend, vice-president of the Liverpool Chamber of Commerce, assured the delegation that Liverpool commercial men looked forward with confidence to the expansion of economic relations between the two countries, and that the Liverpool Chamber would do all in its power towards such development. In order to create a profitable and unhampered trade between Serbia and this country, it was, he said, essential that Serbia should have access to the sea. Dr. Djuritch, replying for the delegation, said that after their inspection of the capacity and importance of Liverpool shipping facilities, they were convinced of the necessity of Serbia having direct commercial relations with the Mersey port, and he hoped that Liverpool shipping men would undertake to open direct maritime communication with Serbia after the war.

EMERGENCY LIFE-SAVING RAFTS.

The Marine Department of the Board of Trade has issued the following notice to shipowners :—

In some cases ships sink so quickly, after being torpedoed, that it is not possible to lower and man the lifeboats. It is therefore important that every British ship should be provided with some form of life-saving appliance that will be immediately available in the event of the vessel sinking quickly, in addition to the appliances required by the statutory Life-Saving Appliances Rules. The Board of Trade desire in this connection to draw the attention of



Plan (Deck Removed).

Side Elevation (Planks Removed).

End Elevation.

Plan and Elevations of Emergency Life-Saving Raft.

shipowners to the recommendations contained in paragraphs 19 and 20 of their notice (No. 388) regarding the special precautions to be taken when a vessel is in a danger zone.

A large number of vessels are already provided with additional rafts or buoyant apparatus that would be free to float clear in the event of the vessel being sunk, but the Board of Trade desire strongly to urge shipowners to provide some such appliance on board every sea-going British ship, whether a passenger ship or a cargo ship.

Such rafts or buoyant apparatus are not intended to replace lifeboats and need not therefore comply with General Rule 10 of the statutory Rules. They can be readily constructed in many ways ; but in order to assist shipowners to provide such appliances with the minimum expenditure of material and labour the design here shown of an emergency raft has been prepared. It is recommended that the following conditions should be followed as nearly as possible :—

(*a*) The volume of the watertight barrels or drums should be not less than indicated by the sketch.

(*b*) The barrels or drums should be disposed at the two sides as far apart as practicable.

(*c*) The length and breadth of the apparatus should not be materially less than shown by the drawing.

Rafts or buoyant apparatus should be stowed in positions whence they can be readily launched overboard and where they will be free to float off in the event of the vessel sinking before they can be launched ; they should not be stowed on hatchways, as the hatches are liable to be blown off by the explosion of a torpedo or mine.

Notes.

50-gallon barrels of steel or wood.

A.—Planks, 11 in. by 2½ in.

B.—Side battens, 3½ in. by 2 in.

C.—Frame section battens, 5 in. by 2 in.

D.—Deck and side plank, 5 in. by 1 in.

E.—Chocks.

F.—Frame section to be secured together at each corner by nut and screw bolts.

REVISED COST OF AMERICAN SHIPS.

New Arrangements with Owners of Requisitioned Vessels.

The Emergency Fleet Corporation of the U.S. Shipping Board has sent a circular letter to American shipowners regarding vessels contracted for by them with American shipyards but subsequently requisitioned. The letter, which is signed by Charles Piez, general manager of the Emergency Fleet Corporation, informs American steamship owners that they can have their ships as contracted for if they are willing to pay the actual cost plus 10 per cent. The letter of the Emergency Fleet Corporation reads as follows : —

The Corporation contemplates an agreement with the ——— Shipbuilding Company whereby it will pay that company, as full compensation for completing these hulls, the actual cost plus 10 per cent. thereof for profit. The actual cost is to be computed in accordance with the provisions of the Revenue Act of September 8, 1916, in so far as the same is applicable, and will include a sufficient amount under depreciation to pay off the extra cost to the shipbuilder of building its plant during the period when high prices prevailed.

There is to be credited in favour of the Fleet Corporation under this arrangement the amounts which your company has received on account of these hulls prior to the requisition.

The Fleet Corporation desires to be informed whether or not you desire to accept our retransfer of these ships when they are completed upon terms set forth in the retransfer agreement and requisition charter recently sent to you, and repay to the Fleet Corporation the entire cost to it of these hulls.

Your prompt consideration of this matter will be appreciated and will enable us to complete the pending arrangement with the ——— Shipbuilding Company.

The actual cost of ships as defined by the Revenue Act of September 8, 1916, consists of (1) labour actually expended on work ; (2) material actually used in construction ; and (3) overhead and administrative charges. The law reads as follows :—

All the ordinary necessary expenses paid or incurred within the year in the maintenance and operation of its business and properties, including rentals or other payments required to be made as a condition of the continued use or possession of property to which the Corporation has not taken or is not taking title or in which it has no equity.

In addition to the above, the following would be charged against costs : (1) All losses actually sustained and charged off within a year and not compensated by insurance or otherwise ; (2) a reasonable allowance or charge for exhaustive wear and tear of property arising out of its use or employment in the business of trade ; (3) amount of interest paid within the year on its (shipbuilding company's) indebtedness ; (4) taxes.

THE VALUE OF SECOND-HAND TONNAGE.

The war has played havoc with the accepted standards by which commodities are valued and in no respect is this more apparent than in the case of second-hand tonnage. It is not so very long ago that a second-hand ship was worth little more than her value as scrap metal plus a percentage based on the length of service she was likely to render before the scrapping time arrived. Nowadays a vessel long since considered a wreck not worth salving will be raised, patched and sold at a price that would have been considered high for a tolerably new boat. In these transactions, however, the British owner, fettered as he is by State control, finds little scope. It is the netural who is reaping the harvest of the sea.

The diagram reproduced herewith shows the values per ton deadweight of a large number of steamships from 1,000 to 8,000 tons deadweight which have changed hands during the last three years. It demonstrates very clearly the wild prices now being paid—a tendency particularly noticeable towards the beginning of the acute submarine campaign. It will be seen that prices at first were confined to the lower values, and during the first year a curve could easily be plotted showing an average value. As the demand for tonnage became more and more accentuated, the prices grew more varied, until, as is shown at the latter half of 1917, almost any price up to £60 per ton was obtained. In all the instances of high tonnage neutrals, and especially Scandinavians, were the buyers, the prices of British ships, excepting coasting vessels, being regulated by the lower earning power of British vessels operating under State control.

As so many factors enter into consideration in estimating the value of a ship, specimen values are difficult to give. We may, however, refer to two instances of sales of British ships during last year. A vessel of 8,000 tons deadweight was sold in 1913 for £60,000. In 1916 it realised £105,000, and little less than a year ago fetched £260,000. A "coaster" of 670 tons deadweight changed hands at the beginning of 1915 for £9,000. It was bought the following year for £23,000, in April of last year for £28,000, and before the year was out again changed hands, this time for another £10,000.

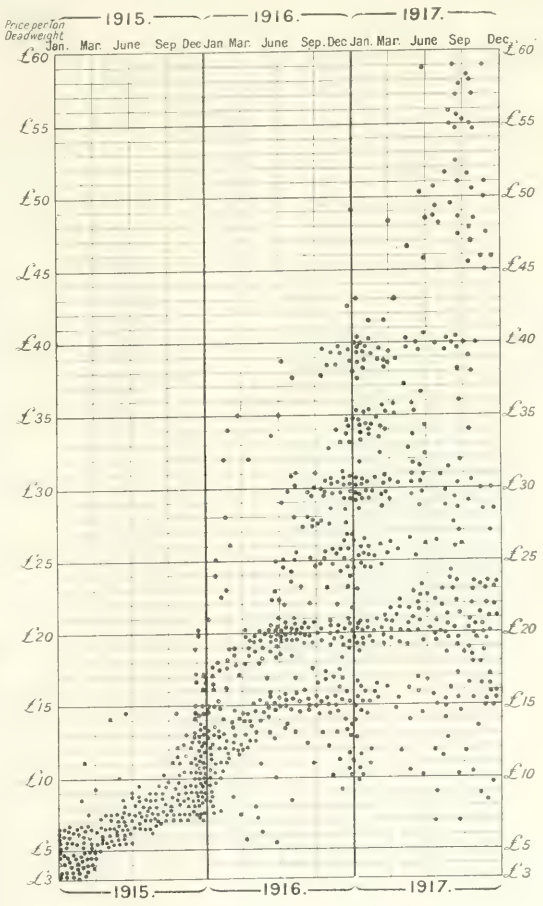


Diagram showing Prices per ton deadweight realised for Second-hand Steamers during the last Three Years.

FIRE AT GERMAN SHIPYARD.—According to the *Weser Zeitung*, a fire has completely destroyed a portion of Luerssen's shipyard, and also eight small vessels at Vegesack, on the Weser, near Bremen.

SPANISH SHIPBUILDING ACTIVITY.

Although they realised large war profits, Spanish owners showed no particular signs of a boom in activity, at any rate until last year. A few concerns increased their capital, and a few new concerns were established, but progress was slow owing to the difficulty of securing additional tonnage. Of all the countries still neutral, which have a mercantile marine of any importance, Spain has the least developed shipbuilding industry, the output of which has hitherto been unable to contribute seriously to the enlargement of the fleet. Matters are now somewhat improved in this respect, the present output of Spanish yards exceeding 20,000 gross tons per annum. Most of the new vessels are for the largest owners, and a certain number of vessels have been purchased abroad during the last year. Within the past few months there has been a belated burst of enterprise, seven large owners being established with capital as follows:—Compania Maritima Euskalduna (Bilbao), £545,000; Compania Maritima Bilbao, £436,000; Compania Naviera Mundaca (San Sebastian), £595,000; Compania Naviera Gascunna (Bilbao), £143,000; Compania Naviera Euzkera (Bilbao), £139,000; Compania Naviera Iturri (Bilbao), £99,000; and Compania Izara (Azpeitia), 52,000. These owners have only one or two vessels each at present, but most of them have purchased or ordered others abroad.

NEW GERMAN YARDS.

The town of Harburg has sold to the Securitas Sprengstoff Werke (Hamburg) an area of 64 acres on the shore of the Harburg harbour for the erection of a shipyard. The site has three water fronts with depth enough for the launching of large vessels. Work on the yard should commence this spring, and as soon as it is completed it is proposed to build standard cargo vessels. The Securitas Werke will build engines in its Westphalian works. Industrial concerns in Rheinland and Westphalia, including the mine owner Fritz Funke, are interested in the scheme. The capital of the Securitas (which emerged from the Securitas Sprengstoffvertriebs Gesell. on April 1 last, with a capital of £78,300) is to be raised to £196,000.

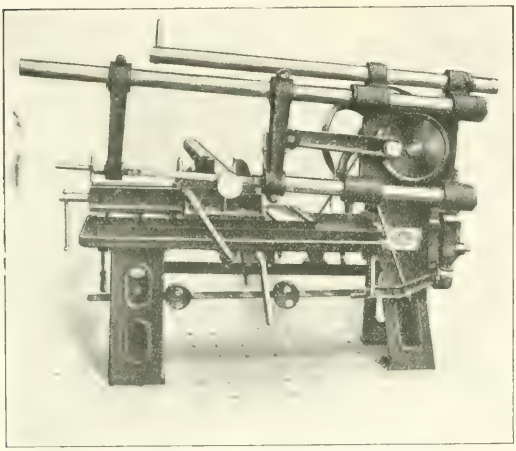
Francis Koch (formerly on the board of the Henry Koch yard, Lubeck) and Wilhelm Koch, engineer to that yard, are co-operating with a group of financiers in the erection of a new yard on the Trave. A suitable site has yet to be purchased. In addition there is the Gelsemkirchener Bergwerks' scheme for a large new yard at Flensburg, with a share capital which is variously stated as £490,000 or £830,000.

SHIPYARD APPLIANCES.

"VILVALLE" HEAVY DUTY SAWING MACHINES.

Modern shop practice has shown the rotary cutting-off machines and band and circular saws to possess great advantages for many classes of work, but it is also the case that works managers and engineers who study the efficiency of their plant are coming to realise more and more the possibilities of the so-called "hack saw" as a really efficient machine tool. For most classes of work in the shop, the modern type of power-driven reciprocating saw can at least hold its own. For the cutting of solid bars or sections up to 12-in. square, a reciprocating type of saw possesses many advantages apart from the first cost being low, as against a rotary cutting-off machine of equal capacity.

In considering the efficiency of a machine of this nature, the chief points to be borne in mind are (1) speed of cut, to give a maximum production; (2) squareness of cut, to avoid waste of material and subsequent machining; (3) ease of manipulation, this making for maximum production and low labour costs; and (4) durability and reliability, in order to save repair costs and troubles. The



"Vilvalle" Heavy Duty Sawing Machine.

"Vilvalle" heavy duty sawing machine made by W. A. Walber & Co., of 38, Victoria Street, London, S.W. 1, has been designed with a view to fulfilling the above conditions, and the machine presents certain novel details which are worthy of being noted.

All modern machines have some method of relieving the blade on the return stroke, and this is undoubtedly a great factor in good clean cutting, making for a quicker and a squarer cut besides lengthening the life of the blade. The method employed on the "Vilvalle" machine consists of a brake band passing round a large drum on the saw guide; a constant tension is kept on the band by a horizontal lever which is weighted, and the band tightened by a cam which operates on the return stroke and lifts the frame a small amount. The effect of this simple arrangement is that it raises the saw and drops it gently owing to the shape of the cam, leaving it perfectly free on the cutting stroke. This band brake is also the means of holding the saw frame in position, the band being so arranged that the frame can always be lifted at any time to any required position, lowered, or left where placed, being always in the operator's full control. The frame has been so designed that it can be lifted right back into a vertical position, leaving the table perfectly clear, so that heavy bars can be lowered on to the table by a crane without any obstructions, and without fear of breaking th saw. Another advantage of having a frame with such a large movement is that work as high as 2 ft. from the table can be cut.

To obtain a true cut depends upon the design of several parts of the machine and upon the guides in particular. The all-important point, however, is that the guides must be in the same plane as the connecting rod and crank. If this is not the case not only is the pressure on the guides very great due to side strains on all parts, but that same pressure is reversed in its direction on every stroke of the saw. The guides on the "Vilvalle" saw have exceptionally large surfaces, and consist of two steel tubes sliding in two ample bearings, each in the same plane as the connecting rod as shown in the accompanying illustration. These tubes are a little farther apart than the stroke of the saw, so that any twisting forces are taken by two bearings far apart instead of one which is made square as is the case on some machines. It is obvious that this type of guide is not only better designed to take any thrust, but actually gets infinitely less. Moreover, the tube that forms the top guide also forms the top of the saw frame. The front arm is then adjustable and can be moved along the tube and clamped in any required position according to the length of the blade required. It is kept in line by a long keyway in the top tube so that no setting is required on moving it.

The downward feed on most machines is attained by means of a weight. In some cases this weight is carried on a bar above the frame, and the weight of the frame itself is not only the minimum, but it is permanent. This arrangement is satisfactory for small machines, but for higher power machines it is advantageous, in fact, necessary, to reduce the pressure on the cut to quite a minimum when starting to cut small sections and thin edges such as the edge of a steel joist or an angle. In the "Vilvalle" machine the weight on the frame can be moved right back until the frame itself is practically balanced. This weight consists of a steel shaft which can be moved in bearings above the saw guides, and can be locked instantaneously by simply a twist. The weight is stationary so that the saw can be easily started with practically no weight on, and then the bar slid along to obtain the feed as required. When the cut is finished, the weight is simply pushed right back, and the frame being nearly balanced is very easy to manipulate.

The drive is by belt on to fast and loose pulleys on the machine. The knock-off gear, which stops the machine instantaneously on finishing a cut, is worked by a falling weight which carries the belt on to the loose pulley. This weight is released at the proper moment by the saw frame pressing down a lever which frees a catch and allows the weight to fall, thus operating the striking gear. In this gear the saw frame gradually presses down the lever until at the right moment the catch is passed. This catch is provided with a hardened steel face to ensure against undue wear.

The table has a large planed surface provided with tee slots, so arranged that the vice can be removed, leaving a clear table space for bolting down work which cannot be conveniently held in the vice.

Owing to the fact that a continuous supply of the cutting lubricant is necessary on these high-powered machines, a rotary pump is supplied giving a copious flow. The lubricating service is so arranged that there are no pipe joints to work loose or to leak, the nozzle being carried by a universal adjustable standard which can be set in any position on the table by simply unscrewing a knurled nut, or can be removed quite clear from the table if desired. A movable galvanised tank is supplied with each machine.

The machine is made in two sizes having the following dimensions :—

	No. 1.	No. 2.
To take blades up to	[illegible]	17 in.
To cut rounds and squares up to	[illegible]	8 in.
To cut joists and channels up to	[illegible]	8 in. by 8 in.
To cut angles up to	[illegible]	5 in. by 5 in. or 7 in. by 3½ in.
Size of pulley	[illegible] in.	18 in. by 3 in.
Number of strokes per minute	[illegible]	110
B.H.P. required	2	1½

GENERAL NEWS SECTION.

PERSONAL.

Mr. W. M. Bartram, shipbuilder, Sunderland, has been elected a representative on the River Wear Commission in succession to the late Colonel J. D. Gregson.

Mr. Owen Harries, a Swansea shipowner, has been elected as a Swansea Harbour Trustee. Mr. Harries takes the place of Sir Griffith Thomas, who recently resigned.

Mr. George Todd Symons, of G. T. Symons & Co., shipbrokers, 4, Lloyd's Avenue, E.C.3, whose death occurred on October 17, 1917, has left estate valued at £62,102, with net personalty of £59,062.

Mr. Raymond R. Stevens, vice-chairman of the United States Shipping Board, and Mr. George Rublee, a member of its legal staff, are to be sent to London as permanent representatives of the United States Shipping Board.

The Board of Trade have awarded a piece of plate to Señor Don Francisco Benlloch Buiges, Lighthouse Keeper at Touriñana, Spain, in recognition of his services to members of a shipwrecked British crew in October, 1917.

The death occurred on January 24, at New Cross, of Mr. Benjamin Jesse Jacob, J.P., late partner of B. Jacob & Sons, lightermen and tug owners. He was in his 82nd year, and was the first mayor of the Metropolitan Borough of Deptford.

Mr. W. St. D. Jenkins, C.B.E., Assistant Director of Contracts, has been called upon to take up important work at the Admiralty. Since the outbreak of hostilities he has been in charge of the supplies of coal for the Admiralty and Allied Governments at Cardiff.

Sir William Beardmore, Bart., has won this year's Bessemer Gold Medal, which is awarded "to the inventor or introducer of any important or remarkable invention either in the mechanical or chemical processes employed in the manufacture of iron or steel."

The Board of Trade have awarded a piece of plate to Captain David Liljeqvist, master of the Swedish motor vessel *San Francisco*, of Stockholm, in recognition of his services to a shipwrecked British crew whom he rescued in the North Atlantic Ocean in August, 1917.

Mr. John R. Webb, who has been for many years general manager of the Booth Steamship Company, has been elected a member of the board of directors as from January 1. Messrs. F. G. Heise, A. J. Robertson, and C. K. Butler-Stoney, assistant managers, have been appointed managers of the company.

Chief Petty Officer Charles Callender, R.N.D., who has been awarded the D.C.M., has also been presented with a gold chain and medal and a case of pipes by the platers employed by J. Readhead & Sons, Ltd., South Shields, and with a cheque by the firm. Mr. Callender was previously a plater at Readhead & Sons' shipyard.

The death occurred last week, at Rutherglen, of Mr. Robert Kelly, general outside manager, engine department, of Alexander Stephen & Sons, Ltd., shipbuilders, Linthouse, Glasgow. Mr. Kelly had been with the firm for over 36 years, and was included in the M.B.E. list of honours recently conferred by the King upon war workers.

The Liverpool Salvage Association have made the following elections for 1918:—Mr. W. A. Edwards (Secretary of the Sea Insurance Company, Ltd.), chairman; Mr. F. R. Edwards (Secretary of the Reliance Marine Insurance Company, Ltd.), senior deputy-chairman; and Mr. O. H. Rathbone (Union Marine Insurance Company, Ltd.), junior deputy-chairman.

The Directors of the Mountstuart Dry Docks, Ltd., have elected Mr. Frank Shearman, Managing Director of the company, as Chairman in succession to the late Sir John Gunn, and Mr. S. W. Hansen as a member of the Board. They are both well known in South Wales dry dock and shipping circles. Mr. Frank Shearman is also Chairman of John Shearman & Co., Ltd., and of Mordey, Carney & Co., Ltd., dry dock owners, Newport. Mr. Hansen is a well-known shipowner, being principal of the Hansen Shipping Company, Ltd., Cardiff, and also a Director of Mordey, Carney & Co., Ltd.

The death has taken place of Mr. George Milne, senior partner of Thos. McLaren & Co., shipbrokers, of Bothwell Street, Glasgow. The deceased gentleman joined the firm in 1879, and for many years occupied a prominent position in shipping circles. He was a Member of the Institute of Engineers and Shipbuilders and an Associate of the Institution of Naval Architects, London.

Photo. [*Lafayette.*

The late Mr. George Milne,
Senior Partner, Thos. McLaren & Co., Shipbrokers, Glasgow.

We take the following reference to Mr. Christoffer Hannevig from our New York contemporary, *Shipping*:—"Norway is proud of her great sculptor, Gustav Vigeland, but financial considerations have placed limits upon the realisation of many of the conceptions of his genius. Years ago the city of Christiania decided to buy his fountain, consisting of a group of figures, but, in order to provide it with a suitable setting, more money was required than the authorities were able to provide. Mr. Christoffer Hannevig has now come forward to fill the want and has placed 1,000,000 kr. at the disposal of the sculptor to enable him to carry out his plans in their entirety, and at the same time has offered to present to the city the site itself and to build an opera house at a cost of over 7,000,000 kr. As might be expected, such munificence has encouraged the Norwegian papers to devote columns to Mr. Hannevig, who is the head of the firm of Christoffer Hannevig, Inc., operating several shipyards in this country. Starting with a small capital in 1915, he has amassed a fortune which makes him one of Norway's richest men. He owes it all to his energy and faith in the future of the shipping industry, and he is just over 33 years of age."

New Shipyard at Toronto.—The construction is in progress of a large shipbuilding plant at Toronto, on the west side of the harbour, for the Dominion Shipbuilding Company, Ltd., which was recently granted a provincial charter. It is expected that the whole plant will be ready by next summer, when work will commence on the construction of six steel cargo vessels for ocean service. Five shipbuilding berths capable of taking ships up to 261 ft. in length by 43 ft. beam, are being erected. It is expected that employment will be provided for 2,000 men.

FROM OUR CORRESPONDENTS.

CLYDE DISTRICT.

(FROM OUR OWN CORRESPONDENT.)

Shipowners' Benevolent Association.—Though the activities of the Glasgow Shipowners' and Shipbrokers' Benevolent Association are largely curtailed on account of the war, advantage is being taken of the opportunity to build up the capital funds of the Association. The annual report, which was approved at a meeting of the association held last week, shows that as the result of a special appeal issued by Mr. R. J. Dunlop, president, a sum of £5,000 was raised during the year, the money being invested in War Loan. The funds have been increased from £9,081 10s. 6d. to £14,519 12s. 11d., being a net gain to capital of £5,438 2s. 5d. Nineteen new members were admitted during the year, and six died.

Seamen's Friend Society.—Mr. J. A. Roxburgh, who was one of the principal speakers at the ninety-fifth annual meeting of the Glasgow Seamen's Friend Society last week, paid a tribute of praise to the men of the mercantile marine. He said that those connected with shipping would bear him out in saying that they did not know a single case of a ship being delayed by any man refusing to go to sea because of the submarine danger. Excellent work, it was stated, had been done by the Society among seamen frequenting the Clyde. The report of the work showed that the agents of the society had visited 1,820 ships in the harbour, and 4,923 seamen's families ashore, while 117,224 seamen had visited the two institutes conducted for the benefit of seafaring men. For many years Sir Joseph Maclay, Shipping Controller, has taken an active part in the management of the society and at the annual meeting last week he was re-elected honorary secretary.

Shipyard Workers' Wages.—A number of applications by shipyard workers on the Clyde and East Coast of Scotland came before the Committee on Production at sittings held in Glasgow on Thursday and Friday last. The Boilermakers' Society submitted a claim on behalf of caulkers on the Clyde for payment of 1s. 4d. plus 10 per cent., per hour, plus war bonuses, when engaged on obstructed work in connection with merchant ship repairs, contending that the same rate should be paid on Admiralty and merchant work. The Ship Constructors' and Shipwrights' Association asked for an adjustment of the wages paid to shipwrights in Aberdeen and Dundee to the Clyde level. It was pointed out on behalf of the shipwrights that the Dundee rate was ¼d. per hour below the Clyde rate, and that of Aberdeen ½d. per hour lower. The application was opposed on behalf of the Employers' Federation. A third case was that of the shipyard painters at Dundee, who asked for an increase of 2d. per hour upon present rates for tank and dry dock work. The Committee reserved their decision in each case.

Shipowners and Scottish Ship Canal.—The position of affairs with regard to the proposed ship canal across central Scotland presents several interesting features, the most puzzling of which is the attitude of Clyde shipowners towards the project. One of the strongest pleas put forward by the advocates of the proposed canal is that it will be of immense benefit to the commerce and shipping of the country apart altogether from the strategic value of the canal. At the same time shipowners themselves are opposed to the proposal. In the annual report of the Clyde Steamship Owners' Association, submitted at the annual meeting of the association on Monday last, the directors state that on consideration they felt that a canal by either the Loch Lomond or the direct route would be of little or no value to shipowners, and therefore could not be advocated from a commercial point of view, as the capital expenditure would be so great that the canal could not possibly be made to pay. If, therefore, the canal was necessary for strategic purposes, the Admiralty were better fitted to decide the route.

SCOTTISH EAST COAST DISTRICT.

(FROM OUR OWN CORRESPONDENT.)

Dundee Harbour Workers' Wages.—A number of applications for increases in wages have recently been made by employees of Dundee Harbour Trust. The weighers at the harbour, who received an advance of 1s. per day in July last, bringing their wages up to 9s. per day, have asked for an increase to 12s. The Trustees offered another rise of 1s., but this offer has not been favourably received by the men, who now propose to submit the matter to the Ministry of Labour for decision.

Ferro-Concrete Shipbuilding at Dundee.—The firm which made application some time ago to Dundee Harbour Trust for a site on which to establish a shipyard for the building of ferro-concrete barges, have not yet been able to come to a satisfactory arrangement with regard to the matter. It was thought that Earl Grey Dock might be utilised for the purpose, and representatives of the firm indicated that the dock could be made suitable for the requirements of the business which they proposed to establish. It has been ascertained, however, that there are a number of serious objections to the closing of the basin for shipping purposes. A committee of the Harbour Trust, who have had the matter under consideration, have agreed unanimously that they cannot see their way to give up Earl Grey Dock.

Navigation of the Firth of Forth.—An Admiralty notice to mariners, dated January 25, relating to the East Coast of Scotland, amends and cancels the notice issued last year in regard to the navigation of the Firth of Forth. The change to be noted is that all merchant ships are now only permitted to enter the Firth of Forth when they have sufficient daylight to enable them to reach the examination station before the close of official day. Vessels must pass between Isle of May and Anstruther Wester, thence they must steer a course so as to pass two miles south of Elie Ness and within half a mile to the southward of a green buoy in latitude 56 deg. 09 min. N., longitude 2 deg. 51 min. W., thence (if not met by a pilot vessel or examination steamer), steer 297 deg. (N. 45 deg. W. mag.) for 1½ miles to pass to the southward of a second buoy, thence to the examination station. The examination station is now 240 deg. (S. 78 deg. W. mag.) 1½ miles from Ruddon's Point.

New Shipyard at Montrose.—There are good prospects that a new shipbuilding yard will shortly be established at Montrose. The negotiations which have been proceeding recently between Montrose Town Council and an engineering firm in Glasgow, acting on behalf of clients are now well advanced. The ground in question is on the east side of Rossie Island, and is of about 13½ acres in extent. Three acres of this ground which belonged to a private firm have already been purchased. The company projecting the scheme is known as the Union Ship Engineering Company, Ltd., and it is reported that they propose building vessels up to 300 ft. in length. There is room on the site to lay down some fifteen building berths. Workshops will be erected, including engineering works for the construction of oil engines. The site is said to be admirably adapted for the launching of vessels as there is a good depth of water even at low tides opposite Rossie Island.

NORTH-EAST COAST DISTRICT.

(FROM OUR OWN CORRESPONDENT.)

Men for the Shipyards.—The fact that some 20,000 skilled men are to be released from the army for work in the shipyards on the Tyne, the Clyde and elsewhere, shows that the building of merchant vessels was not regarded of the importance it should have been in the first two years of the war, otherwise the skilled young men would not have been permitted to enlist as readily as they did. Mr. John Hill, general secretary of the Boilermakers' Society, referred to the subject in a speech at South Shields, and pointed out that dilutees could not be trained in the building of ships in a few months as they had been in some so-called highly-skilled trades. Their opposition to dilution was not based on trade jealousy, but on national needs, and their contention was supported by the employers. This may be regarded as a very fair way of putting the position, and it can be fully borne out by the needs of the hour.

Ships' Officers and Board of Trade Certificates.—At the last meeting of the North of England Steamship Owners' Association, held in Newcastle, Mr. J. W. Wilkinson presiding, correspondence was read from the Conference of Navigation Schools in Glasgow pointing out the great hardship imposed upon ships' officers in qualifying for Board of Trade certificates in that the period spent in studying in technical schools was not allowed to count as qualifying service. The Association was asked to make representations on the subject to the Board of Trade requesting that a period of not more than 12 weeks spent in a Navigation School should be recognised as equivalent to the same period at sea. The matter was referred for consideration to a sub-committee consisting of Mr. Daniel Stephens and Mr. M. M. Mein, who subsequently

drafted a resolution to be forwarded to the President of the Board of Trade.

Labour Visit to Western Front.—The fact that the National Amalgamated Union of Labour, Newcastle, like numerous other trade unions previously, lately accepted an invitation to send a party of representatives to the Western Front in order to give a first-hand account to their fellow-members on their return of what is being done to win the war, and thus encourage increased output of essential materials, has aroused a good deal of adverse criticism among workmen generally as to the wisdom of these trips, deprecatingly described as "joy rides." The latter designation is, of course, not a fair term to use in the circumstances, as it is well known that many labour leaders have come back from the Front deeply impressed with the magnitude of Britain's task, and have tried to convey their impressions to the men in the shipyards and factories. The "joy-rides" are, nevertheless, being strongly disapproved. The boilermakers in the Hartlepools, for example, have declined a Government invitation to visit France, and have urged that as the demand has been, and is, insistent for "ships, ships and still more ships," that it is an extravagant loss of valuable skilled labour to release 200 or 300 workmen for a week or more to enable them to visit France. In the opinion of the shipyard men in the Hartlepools the Government should put a stop to such visits.

The Moor Line, Ltd.—On Monday last the shareholders of the Moor Line, Ltd., Newcastle, received a circular stating that it was thought desirable to say with regard to the many rumours of the sale of the company's remaining steamers that whilst the directors have under consideration the sale of the steamers, there was no intention of winding up the company. If the steamers were sold the money would be invested in securities to await a favourable opportunity for its re-employment in shipping. An extraordinary meeting will be held in Newcastle on Tuesday, February 12, at 11 a.m., to consider two resolutions. The first proposes that the managing company continue to be paid the annual sums provided in the management agreement of January 17, 1916, in respect of each steamship lost or sold, pending the re-investment of the funds of the company in new tonnage, and that in the event of the sale of the remainder of the company's fleet the directors be authorised to pay to Runciman, Ltd., a fair and reasonable sum as compensation for their loss of employment as the chartering, insurance and general agents of the company.

It was currently rumoured in Newcastle in the course of the day that the company's fleet of nineteen steamers had been sold for £2,225,000.

THE MERSEY DISTRICT.

(FROM OUR OWN CORRESPONDENT.)

Liverpool Steamship Owners' Association.—At the annual meeting, held on Monday this week, a distinct compliment was paid to Mr. T. Harrison Hughes, of the Harrison Line, the retiring chairman, by the Association re-electing him to that office for another year. Mr. Hughes has proved himself a powerful champion of the shipowners' interests, and his vigorous denunciation of Mr. Bonar Law's Budget proposals, in May last, to deprive British shipowners of the concession to set their losses against their profits over a two-year period or more, was approved and endorsed by shipping interests throughout the entire country. I find from my records that not since the year 1873 has a chairman of this body held office for two consecutive years. Mr. William Moss who, if the usual procedure had been followed would have succeeded to the chair, was re-elected vice-chairman for another year.

SOUTH WALES DISTRICT.

(FROM OUR OWN CORRESPONDENT.)

Shipping Conferences.—At a meeting of the Cardiff Chamber of Commerce, Mr. R. Sanderson referred to the question of shipping conferences; these, he said, should not be conducted except under Government control or guidance. There were differences of opinion with regard to the action taken in the past, but he thought this was a subject which ought not to be dropped, but should have further consideration on the part of the Chamber. Mr. J. A. Jones said that the position taken up by Chambers of Commerce in regard to rings was that they were detrimental to the national interests, and they felt they should protest against inter-line rings which were to the detriment of the British export and import trade. The question was eventually referred to the Council of the Chamber for consideration.

Swansea as a Controlled Port.—On Friday a meeting was held of representatives of the Swansea Harbour Trust, Chamber of Commerce, Corporation, and the Metal Exchange, which had been called in consequence of a resolution passed recently by the Chamber of Commerce, in connection with the efforts which are being made to get Swansea recognised by the authorities as a controlled port. The meeting decided to form a committee of representatives of outside bodies to take the matter up in conjunction with the Harbour Trust Management Committee.

Increased Wages for Riggers and Boatmen.—The Committee on Production have issued their award, under date January 28, in respect of the application made by the Cardiff and Penarth riggers and boatmen for an advance of 37½ per cent. on their tariffs. The Committee now grant another advance of 12½ per cent. to date from the first full week following the date of the issue of the award, and to be regarded as purely a war bonus. This further increase makes the present rates 50 per cent. on the old tariff. It may be added that the shipowners, although apparently invited, were not represented at the arbitration proceedings.

After-War Relations of Capital and Labour.—An interesting discussion on the relation of employer and employed after the war took place at the monthly meeting of the Cardiff Chamber of Commerce. Mr. John Andrews said that with the object of promoting friendly relations between employers and employed, an association had been formed under the name of the National Alliance of Employers and Employed. He appealed for a conference, called by the Chamber of Commerce, of all sections of industry in South Wales. Mr. W. H. Diamond, in supporting, stated that although he was a president of the Dock and Ship Repairers' Association, he did so in a personal capacity. He was in full sympathy with the movement. Action should be taken to induce the more thoughtful section of trade unionists to take a more active and intelligent interest in the affairs of their unions. Sir T. E. Watson, who spoke in favour of a conference, said that in his view there was not half enough publicity given on the part of employers to their views, and too little attention paid to misleading statements made by many leaders of trade unions.

Chamber of Commerce and Claims on German Steamship.—At the annual meeting of the Newport Chamber of Commerce the following resolution was carried:—"That this Chamber having considered the case of the German steamship, *Horst Martini*, and the claim of certain British creditors, is of opinion that a strong *prima facie* case has been made out for inquiry, with a view, if possible, of effecting a remedy in cases of a similar kind, and that the particulars of the case be sent to the Council of the Associated Chambers of Commerce requesting them, after consideration, to take the matter up with the proper authorities in the general commercial interest." Mr. E. White, in moving the resolution, commented upon what he described as the extraordinary dilatory and unbusinesslike methods of the Prize Claims Committee and other Government Departments in settling the just claims of British creditors arising out of the seizure of the *Horst Martini* at Newport on the outbreak of war. Mr. J. H. Vickery, general manager of the Alexandra (Newport and South Wales) Docks & Railway Company, was elected president for the ensuing year.

BELFAST DISTRICT.

(FROM OUR OWN CORRESPONDENT.)

Shipyard Extensions.—Mr. Robert Thompson, M.P., speaking at a meeting of the Belfast Harbour Board on Tuesday, said the board had recently concluded an arrangement for the letting of 73 acres of land on the east side of the Musgrave Channel to Harland & Wolff, Ltd. This was in addition to 40 acres let to the same firm on the west side of the channel and a further letting of 20 acres to Workman, Clark & Co., Ltd., for shipbuilding purposes.

Shipbuilding in Dublin.—Barclay & Gibson have accepted the offer of the Dublin Port and Docks Board regarding a site for shipbuilding purposes. The Board had agreed that on those gentlemen lodging £14,000 they would undertake to complete one-half of each of the following works: piling, filing, excavating, and dredging, and to construct the new road to within 250 ft. of the eastern boundary of the proposed site. If satisfied at any time within five years that the firm had substantially established a steel

and iron shipbuilding yard as a going concern the Board would on request proceed to complete all the works set out in the report of December 10, 1917.

Petition against Harbour Bill.—The Belfast Corporation decided on February 1 to petition against the Harbour Commissioners Bill in Parliament with a view more to preserving their *locus standi* than to actively opposing the measure. There was a bitter wrangle between these bodies over the Corporation Bill in 1911 which cost the rates some £10,000, and an effort will be made to avoid litigation at Westminster this time. The Corporation wish to take advantage of the promotion of the Bill to adjust points of difference with the harbour people relative to sewage disposal, and rates on harbour property, and a section of the Corporation is anxious to press for a widening of the harbour franchise and the representation of the Corporation on the Harbour Board.

Progress of New Shipyard.—Good progress is being made with the preliminary work in connection with Harland & Wolff's new shipyard on the east side of the Musgrave Channel. Lord Pirrie is making a prolonged visit to the city, and it is confidently expected that we are on the eve of big developments. The difficulty regarding the ground which the Harbour Board had granted to the Corporation at the head of the Musgrave Channel has been practically settled in an amicable way. This ground would cut off the new yard from Harland & Wolff's engine works, and its acquisition by the Queen's Island firm is essential. The Corporation has now been offered a site on the Harbour Estate for the electric station, and this is likely to be accepted. In some respects it is a better site than that contemplated. Lord Pirrie was entertained by the Lord Mayor in the City Hall a few days ago, and the relations between his lordship's firm and the local bodies are very harmonious.

THE FREIGHT MARKETS.

(From Our Own Correspondents.)

London.—Chartering business on the Baltic Exchange continues of very small dimensions, but rates are kept at top figures by the keen competition which exists for the tonnage available. From the River Plate homeward the ruling rate is 200s. to the United Kingdom and 205s. to France. The ports of the North American Atlantic seaboard are chiefly interested in finding tonnage on net form of charter, for which rates are unchanged at 230s. to the United Kingdom, 260s. to France, and 360s. to Italy, with 30s. additional for Gulf loading. Heavy grain offers from the Northern Range at 50s. to the United Kingdom, 56s. 3d. to France, and 75s. to Italy. There is little doing with coal cargoes from Virginia to the Plate, but nitrate business offers at 185s. to the United Kingdom. In the East high rates are maintained and competition is keen. Karachi indicates 250s. to the United Kingdom on scale basis, and Bombay, on deadweight, would pay 275s. to the same destination or 400s. to the Mediterranean. From the Madras Coast to Marseilles, kernel cargoes are worth 550s., and rice cargoes from Saigon or Burmah to France or the United Kingdom can be had at 500s. The Mediterranean ore and phosphate ports are taking up tonnage on the basis of 45s. Huelva to the Mersey, 50s. Bilbao to Boulogne, 50s. Bougie to the Clyde, and 70s. Sfax to the Bristol Channel, while pyrites offer from Huelva to the East Coast United Kingdom at 60s. Several fixtures are reported at 17s., Bordeaux to the Bristol Channel, and Bayonne to the same destination has been done at 20s.

Glasgow. The local freight market has been quiet throughout the week, but rates have been firmly held all round. Tonnage for outward cargoes was offering very sparingly, and boats were also difficult to secure in the homeward trade. The following were among the fixtures reported:—Bordeaux, 600, 1,200, 1,300; Bristol Channel, 17s., prompt; time charter, States and Mexican trades, about 35s., twelve months; time charter, general trades, 43s. 6d., twelve months; time charter, States and West Indies, 35s., one round trip, delivery and re-delivery, north of Hatteras; Calcutta to River Plate, 300, 50s., prompt; Gulf to River Plate, 970, $51, prompt; and sailing ship, Gulf to North Cuba, 475, $19, prompt.

Newcastle-upon-Tyne.—The volume of "free" tonnage on offer in the local chartering market shows no improvement and is, indeed, as small as it has been at any time since the new year. The coal export business is suffering seriously and, were it not for the goodness of the home demand, there would be general stagnation throughout the mining districts of Northumberland and Durham. As it is, with not even a big volume of official requisitioning to help the collieries, pits—producing steam coal, gas sorts and bunkers—which are mainly dependent upon export business for the sale of their output, are maintaining operations with much difficulty and a great deal of working time is being lost. Fixtures arranged in the local freight market during the past week have been almost wholly confined to Sweden. In that direction, alone, boats have offered somewhat numerously and rates have come down with a run. Thus, whilst Gothenburg was done during the previous week at from 165 kr. to 180 kr., that port has been fixed for during the week under review at from 150 kr. to 160 kr. Similarly, Stockholm, which was done at 190 kr., a little over a week ago, has been arranged for at 175 kr. At the time of writing, however, rates are rallying, and several boats are in negotiation for Sweden at figures several kroner higher than those just mentioned. So far as coasting business is concerned, a vessel was fixed at Newcastle for Seaham Harbour loading to London at 21s. 3d. Since that time, however, a new official scale of fixed freight rates has come into operation for coasting ports. So far as the North-East Coast is concerned, these rates for free delivery in all cases are as follows:—Tyne, Wear or Blyth to London, 17s. (equal, with f.d., to 18s. 3d.); Yarmouth, 15s.; Chatham, 17s. 6d.; Poole, 25s. 6d.; Plymouth, 26s. 6d.; Channel Islands, 30s.; subject to 10 per cent. extra for all vessels of 500 tons and under. From Seaham or Amble 6d. above these figures is to be paid. For the coaling stations, Gibraltar has been done at 100s., whilst Port Said continues at 200s. The rate to the Spanish Atlantic remains at 180s. for Bilbao or Santander. For the Portuguese ports figures are 115s. for Lisbon and 125s. for Oporto. The Spanish Mediterranean quotation has advanced to 450s. to Barcelona. In none of these directions, however, has the market been tested recently.

Liverpool.—There is an active inquiry in outward freights, but with no offers of ships business done is confined to a few fixtures at the coal ports. To neutral ports Spain is still offering attractive rates, but tonnage does not respond, though the last fixture was done at 410s. There has been a drop in the rates to Scandinavia, and current values are 150 kr. to Gothenburg, and 190 kr. to Stockholm. Otherwise outward rates are firm all round. Time chartering is quiet and suitable boats scarce. Rates rule firm on late basis of 43s. 6d. to 45s. general trading for 12 months, and 35s. in the States and West Indies trades. Homeward business done is on a relatively small scale, with most markets badly needing ships. North America has a brisk inquiry for net charters on basis of 230s. to United Kingdom, 260s. to France, and 360s. to Italy, while grain still offers 50s. to United Kingdom, 72s. 6d. to Marseilles, and 75s. to West Italy. Eastern markets rule quiet but firm. Rice ports and Indies would pay advance on late figures to get tonnage. River Plate homewards dull, and indicating 200s. to United Kingdom for neutrals. Nitrate ports quote 185s. to United Kingdom.

Cardiff and Swansea.—Quietness has been the chief characteristic of the outward coal freight market. Orders continue plentiful, but owing to the lack of tonnage facilities the majority of these remain on the market. The requirements of the authorities have been fairly well met in regard to vessels, but in other respects the position remains unchanged. Rates for all neutral destinations continue to be quoted on the basis of recent transactions, and for the limitation ports maximum figures have been readily forthcoming. Extremely few fixtures were disclosed. The French ports were represented by the following:—Caen, 48s. (neutral); Cherbourg, 48s. 9d. (neutral); St. Malo, 22s. (allied); and Rouen, 48s. 9d. (neutral). On the Swansea market business was practically confined to the limitation ports, and rates were maintained up to the maximum. The only transactions disclosed were Dublin at 26s., and Rouen at 48s. 9d. (neutral).

Hull.—The market is fully firm for all destinations and in every section of chartering tonnage continues to be scarce. The West Italian market does not show any substantial increase in activity, but a moderate trade is being put through in allocated tonnage at the fixed rates. The North French market swallows up the bulk of the available tonnage either in steam or in sail. The Scandinavian trade is very much restricted owing to the difficulties connected with licences and securing tonnage supplies.

THE COAL MARKETS.

(FROM OUR OWN CORRESPONDENT.)

The coal markets at the principal coal exporting ports of the country have been in a very dull state during the last two weeks. Not only has the demand been poor, but owing to the lack of transport facilities, delay in shipping arrivals and congestion on the railways contract business has been a good deal interfered with. On the North-East Coast pit stoppages and short time working have been of frequent and pretty general occurrence, and in South Wales too there has been a revival of dullness which has led in the past to large accumulations of coal at the collieries with no immediate prospect of conditions improving.

The bunker coal trade has been particularly depressed. The poor arrivals of shipping have been an effectual check on demand for bunkers, and consequently all classes of bunker fuel are in abundant supply at minimum figures. Durham bunkers at the North-East Coast ports are being offered and any quantity is obtainable at 24s. to 27s. 6d. Special bunkers, however, continue rather scarce and are worth fully 32s. 6d., though the official quotation is 30s. At the South Wales ports there are also excessive supplies of small steam coal suitable for bunker fuel, and prices range from 18s. to 21s. 6d., at which figures buyers can satisfy all their requirements, though, as a matter of fact, the demand is very small.

During the week-end the tone of the North-East Coast coal markets showed some improvement. Shipping arrivals are a little better and permitted some of the accumulated stocks to be moved so that pits which had been closed got to work again. There is, however, still much congestion on the railways. Steam coals have been moving off relatively well, though second quality steams are not too well placed, and smalls are in a bad position. The gas coal trade also is poor. Other classes of fuel which are needed inland, such as house coal, coking coal, and smithies, are being fully absorbed, and coke is briskly taken up.

Approximate prices are for best Blyth steams, 30s. to 32s. 6d., and smalls, 18s. 6d. to 20s. 6d.; Tyne primes, 29s. 6d. to 32s., and smalls, 25s. to 27s. 6d.; second steams, 25s. 6d. to 29s. 6d., and smalls, 18s. 6d. to 20s. 6d.; unscreened steams, 24s. to 25s.; North Northumberland steams, 28s., and smalls, 20s.; smithies, 25s. to 30s.; nuts, 32s. 6d. to 33s. 6d.; gas coals, 23s. 6d. to 30s.; coking coals, 17s. to 25s.; house coal, 20s. to 22s. 6d.; bunkers, 24s. to 27s. 6d.; special bunkers, 30s.; foundry coke, 42s. 6d. to 45s.; and blast furnace coke, 35s. 6d.

In South Wales the need of the moment is a larger supply of railway wagons. The absence of sufficient rolling stock is proving very detrimental to business, and added to the shortage of shipping is causing much time to be lost at the collieries, many of which have been closed down or are on the point of closing down. Stocks all round are very much in excess of requirements, and smalls are a drug in the market. Practically no new business has been transacted, the demand being very small. The question of a five days' working week is still being considered, but, apparently, is no nearer a decision. The miners want a five-day working week, but colliery owners oppose the idea, their argument being that a better check on output can be obtained in other ways.

Prices, subject to the addition of the 2s. 6d. a ton war wage increase, are approximately for best steams, 33s.; second steams, 30s. 9d. to 31s. 6d.; ordinary steams, 30s.; drys, 28s. 6d. to 30s.; small steams, 18s. to 22s. 6d.; best large Black Veins, 30s.; Western Valleys, 29s.; Eastern Valleys, 28s. to 29s.; nuts, 28s. 6d. to 30s.; duff, 14s. to 18s.; house coal, 30s. 9d. to 33s.; No. 3 Rhonddas, large, 30s. 9d., and smalls, 26s.; No. 2 Rhonddas, large 27s., and smalls, 17s. to 19s.; through and through coal, 22s. to 23s. 6d.; gas coal, 21s. to 25s.; and patent fuel, 30s.

The Scottish coal trade is enjoying a period of comparative prosperity. Though the export trade is restricted the inland demand is so considerable that the outputs of the collieries are well absorbed, and indeed in the West of Scotland the demand has outpaced the supply, so that many collieries have orders on their books which they are for the time being unable to fulfil.

Prices, with the addition of the 2s. 6d. war wage increase, are for splint coal, 28s. to 30s.; Hartleys, 29s.; Ells, 26s. to 28s.; screened Navigations, 28s. to 30s.; unscreened Navigations, 25s. 6d. to 29s.; steam coal, 27s. 6d., and nuts, 21s. to 23s.

The Hull coal market shows no change. The trade continues very brisk, and the difficulty remains as to how to obtain sufficient supplies. The takings by the Admiralty and other authorities are considerable, and the export trade to France is maintained, a considerable quantity of fuel being also sent South. The home demand is very strong and accounts for all coal left over when the official requirements have been satisfied. There is great pressure for coking coals.

Prices are approximately for large steams, 30s. to 35s.; Hartleys, 27s. 6d.; Yorkshire steam coals, 27s. 6d.; gas coals, 25s. to 26s.; house coal, 27s. 6d.; nuts, 23s. to 25s.; and smalls, 20s. to 21s.

The Midland coal trade is without change, the collieries being hard pressed to execute all the orders on their books. The position in this respect seems to be changing in the direction of increasing pressure for fuel of all kinds, as the manufacturing and munition requirements continue to grow.

The London coal trade has undergone no change, though merchants are not subjected to quite so much pressure for house coal, as a result of the milder weather. The quantity of coal coming forward is fairly sufficient for the needs of the metropolis.

On the Liverpool coal market Yorkshire and Derbyshire hards are in keen demand and Lancashire steam coals have been moving off well, while the bunker coal trade has been quite brisk. Nuts are scarce and in strong demand.

COMPANY MEETINGS.

Sea Insurance Company, Ltd.—The annual meeting was held at Liverpool on January 30.

The Chairman (Mr. George Gilmour) said the report, compared with that for 1914, showed an almost startling increase in the volume of business, while the percentage of profits had been on a descending scale. The year 1914 showed £469,000 of premiums, the year 1915 £623,000, the year 1916 £1,250,000, and for 1917 it was £2,250,000, say nearly five times the amount of 1914, so they had been doing a strenuous business, if not a profitable one. They could not be accused of profiteering. Business for the first half of last year was very bad in the ordinary markets, and marine insurance was good. In the second half of the year business improved, and the ordinary business was quite the other way. He could not say what would be the result of the year 1918, but one thing he considered absolutely necessary, and that was increased rates, and this particularly for maritime business. Every day brought painfully before them that the war increased the risks on ordinary marine business. Absence of lights afloat and ashore, mysterious fires and explosions were very numerous, and put down to enemy incendiarism; whether that was right he could not say. What was a war claim, and what was an ordinary marine risk claim, was also a difficulty, and he feared more was being put down to ordinary risk; so their only safe plan seemed to be to write off doubtful risks as ordinary risks and charge a rate accordingly. The balance at their bankers in New York was upwards of £200,000 larger than last year, and they had requested their agent in New York to purchase in the market £140,000 Anglo-French 5 per cent. Loan, which maintained their financial position there.

Orient Steam Navigation Company, Ltd.—The adjourned 18th ordinary general meeting was held on January 28 at the offices, 13, Fenchurch Avenue, London, E.C.

The Chairman (Sir Frederick Green), in moving the adoption of the report, said that since the early days of the war the company's steamers had fully met the demands made upon them by the Government, and those demands had steadily increased, so that at the present time all the steamers belonging to the company were in the employment of the Government, and were actually under charter to the Government at what were known as "Blue-book" rates. The earnings of the steamers, and even their employment, were controlled by the Ministry of Shipping, for whom the company was acting. Steamers so requisitioned were working for the benefit of the nation, and were sent to such ports as might be deemed advisable without any reference to the trades in which they had previously been engaged. The arrangement was working well, the Ministry of Shipping and the various shipowners working loyally together in order that the best use might be made of the tonnage available. The result of the year's working was a credit balance of £253,021, an increase of £14,805 over that of the previous year. That increase had not come about through increased earnings, for, as a matter of fact, the actual profit received last year was somewhat less than in the previous year, but it had come about, partly by the reduction in the amount of debentures outstanding—they had, therefore, less interest to pay—and partly by an increased amount of interest received on account of investments. Out of this balance they had to pay the preferred dividend, and it was proposed

to carry £100,000 to the general reserve account, to declare a dividend of 15 per cent., free of income tax, on the deferred shares, and to carry forward £112,359, as against £96,996 in the previous year, and that was not altogether an unsatisfactory result of the year's working. It was with regret that he called attention to the statement in the report that two of their steamers had been lost through enemy action. The managers were now in process of arranging with the Government as to the amount of compensation to be paid, but he was afraid that no money compensation would adequately make good to the company the loss these steamers would be to them. It was quite impossible to replace steamers of this class during the war, and when they were able to replace them, the capital outlay would be very considerably in excess of what it was when they built them, for they reckoned that prices to-day were something like 100 per cent. higher than they were when those steamers were laid down. In addition to the total loss of those two steamers, they had had a mishap to a third steamer, which was torpedoed, but, thanks to the skill of those on board, she was successfully brought into port, and at the present time the repairs necessary to fit her again for active service were well advanced. It was satisfactory to be able to report that the loss of life, which in these three accidents might have been very serious, was comparatively slight owing to the splendid discipline maintained on the three ships. Apart from these disasters, the other steamers were all in an efficient condition, and during the year they had been able to add to them a newly-built steamer. The difficulties which beset shipowners just now were pretty considerable, but he believed it was appreciated that all shipowners were doing what they could to help the country at this time of need. In conjunction with other owners, they had done what they could to conserve the nation's food. They had eliminated from their menus all unnecessary luxuries which were suitable for peace times, but not for to-day, and they had also bought abroad all the stores possible, so that practically since the beginning of the war no beef, mutton, flour, butter or sugar had been bought in this country. It would be unwise at a time like this to make any prophecy as to the future, but they could hope that nothing would be done to jeopardise the free action of the shipowners of this country when the war was over. On their own initiative they had built up the mercantile marine of the country, which had proved itself of vital importance during these years of war, and they earnestly hoped that the Government would leave the shipowners alone to build up again the mercantile marine as they could and as might be necessary.

Mr. I. C. Geddes seconded the motion, which was carried.

Argentine Navigation Company (Nicolás Mihanovich), Ltd.—The eighth ordinary general meeting was held on January 30, at Winchester House, Old Broad Street, London, E.C.

The chairman (Sir Owen Philipps, K.C.M.G., M.P.), in moving the adoption of the report, said that since the last annual meeting, Baron Nicolás Mihanovich had disposed of his interests in the company. In proceeding, he said the report and accounts contained a full list of the fleet of steamers and tugs owned by the company at June 30, 1917. The actual amount set aside each year by a shipping company to cover depreciation was a matter about which there was room for difference of opinion. The Inland Revenue Commissioners, before assessing for income-tax, permitted an allowance of 4 per cent. on first cost to be set aside each year, but shipowners had for many years contended that, in the interests of sound management, that allowance by the Inland Revenue was insufficient, and had pressed for a larger percentage to be allowed. Nearly all the great British shipping companies made it a rule to set aside at least 5 per cent. on first cost each year, and that, in his opinion, was a safe figure, which had been justified by the experience of the older shipping companies for more than half a century. In the accounts of the company for the past year they had set aside 5 per cent. for depreciation, and that amount had been written off the book value of the fleet. The sales of certain of their vessels and craft had enabled the company to redeem both its issues of debentures; the 1913 issue had been paid off on February 1, 1917, and the original 1909 issue on June 1, 1917. They had placed £45,000 to reserve account, making that up to £50,000, which was a small reserve for a shipping company having a paid-up share capital of £2,000,000 sterling. The past year had been a very difficult one for the management in Argentina, owing to the many exceptional conditions due to the war, and to the recurrence of local labour troubles. On two occasions the working of their vessels had been completely paralysed by strikes. In the river services the earnings in passage money and freights had fallen off somewhat, notwithstanding that tariffs had been revised to meet the increased working costs; but that reduction in earnings was more than accounted for by the loss of time due to the strikes. A satisfactory increase had taken place in the earnings arising from overseas voyages, and also from towage and lighterage. The board had taken advantage of the high level of prices to dispose of certain ocean-going and other vessels. The reduction in their services necessitated by the existing state of affairs had made it appear desirable to take the opportunity to dispose advantageously of such of their tonnage as could suitably be spared and most conveniently replaced as soon as normal times returned. They proposed, as soon as circumstances permitted, to improve the facilities provided hitherto in every sphere in which their company had operated in the past. It was their intention suitably to provide for the service to and from Patagonia as well as for all their river services, and their connections with Brazil, Uruguay, &c. They were, of course, bound to experience competition, and take all necessary measures successfully to meet it. They would embrace every opportunity for working in harmonious agreement with other steamship lines and with the railways, with a view to furthering the development of trade and commerce. Although it might not be possible for the company to earn large profits whilst the war continued, its future prospects were quite sound. The company was never in a stronger financial position than at present, and the future as regards Argentina was more promising than had been the case for a long time. He felt confident that the business of the company would steadily improve and expand, as on the great River La Plata and on the coasts of Argentina, Uruguay, Brazil, and Patagonia there were great potentialities for the development of trade and commerce after the war, to the mutual advantage of those countries and of this old-established company.

Mr. Arthur Cook seconded the motion, which was carried.

Stella Shipping Company, Ltd.—The second annual meeting was held at Cardiff on January 30. The chair was taken by Captain Walter A. Hepburn, managing director, who said they had had a most successful year, in spite of many drawbacks, amongst which he might name the loss of the steamship *Sommeina*, late *Tanagra*, through enemy action. He was pleased to say, however, that the whole of the crew were saved. The steamship *Stellina* was still on time-charter on behalf of the Government of one of our Allies, and while they were not getting an extravagant rate of freight, they were, nevertheless, earning a living wage, sufficient for them to pay a satisfactory dividend to the shareholders. The position of the company to-day was admittedly a strong one. They had a boat carrying nearly 6,000 tons, in excellent condition, and engaged on a remunerative freight with charters of first-class financial stability, so that they could estimate with certainty that the amount due to them would always be promptly paid. This charter was due to expire in June, 1919, by which time it was confidently hoped that the war would be well over, and shipping would be freed from the restrictions now imposed upon it. The balance-sheet showed insurance premiums paid in advance £7,712, a deposit at Barclay's Bank of £15,000, and amounts owing to the company on open account £9,695, a total of £32,407, against debits on the other side of £18,680, showing a credit balance of £13,700, being excess of assets over liabilities. The steamship *Stellina* was insured for a sum of £110,000 if lost through enemy action or marine risk, so that the £75,000 capital was represented by property worth about £123,700.

The report and balance-sheet were adopted.

At an extraordinary general meeting the following resolution was adopted:—"That the capital of the company be increased from £75,000 to £150,000 by the issue of 75,000 shares of £1 each."

COMPANY REPORTS AND DIVIDENDS.

Howaldtswerke, Kiel.—This company again pays 8 per cent. dividend.

Elmshorner Dampfschleppschiffahrt A.G.—The gross profit for 1917 amounted to £1,550, and it is proposed to pay a dividend of 8 per cent.

William Cramp Sons' Ship & Engine Building Company.—Dividend of 3 per cent. This is at the same rate as six months ago, when dividends were resumed.

Hill's Dry Docks & Engineering Company, Ltd.—The directors have paid an interim dividend of 10 per cent. per annum, less income-tax, in respect of the past half-year.

Port Talbot Railway & Docks Company.—The directors have decided to recommend the payment of the usual dividends at the rate of 8 per cent. per annum on the ordinary shares, and 4 per cent. per annum on the preference shares, for the half-year ended December 31, 1917. Interim dividends at these rates were paid in August last in respect of the half-year ended June 30, 1917. Warrants will be posted on February 25.

Southampton, Isle of Wight and South of England Royal Mail Steam Packet Company, Ltd.—The directors state that owing to circumstances not under their control the accounts for the year ended September 30, 1917, have not been completed. They feel satisfied, however, that after the deduction of debenture interest already paid, a payment of a dividend of 6 per cent., free of income tax, will be possible, and propose to submit a resolution to that effect.

Yorkshire Coal & Steam Shipping Company, Ltd.—The half-yearly report states that for the half-year ending December 31 last there has been a profit of £3,032 after providing for all liabilities, including excess profit tax and income tax. The directors propose to place £1,000 to a fund for the depreciation of steamers, and to pay a dividend of 12½ per cent., which will absorb £2,500, leaving £273 to carry forward. The company has a subscribed capital of £20,000 in £10 shares, and the steamers' earnings for the half-year are stated to be £21,489.

Stella Shipping Company, Ltd.—The report for the period from November 26, 1916, to December 31 last, states that the balance to credit of profit and loss is £2,925 after payment of dividends. The sum of £15,735 has been paid for income tax and excess profits duty, and the whole of the preliminary expenses have been written off. The company during two years of trading has paid in dividends an average of 15 per cent. per annum, free of income tax, the last payment having been made on December 6, 1917. A meeting of shareholders has been called to increase the capital of the company from £75,000 to £150,000. The dividend for the past year was 10 per cent., against 20 per cent. for the previous year.

Marconi Wireless Telegraph Company of America.—The directors have issued a preliminary statement to the effect that during 1917 (December estimated) the gross earnings were $1,328,525, against $862,501; total expenses, including estimated taxes, $576,038, against $624,568, and net earnings from operations $752,487, against $237,932. Income from investment of surplus funds amounted to $97,442, against $98,107, making $849,930, against $336,040. Reserves for depreciation absorb $240,500, against $76,151, so that net income for the year after charging reserves amount to $609,430, against $259,888. Capital stock stands at $10,000,000 and undivided profits and reserves at $2,150,000.

Sigl Lokomotivfabrik.—The gross profit amounts to £61,000 (compared with £59,700 last year), including £4,100 (£3,880) brought forward. The net profit is £30,250 (£33,000), from which 8 per cent. (10 per cent.) dividend will be paid. Though the gross profit is not much greater than last year, it is 46 per cent. greater than for the last peace year. The turnover shows an increase, but the net results are less favourable for the past year, owing to the increased cost of materials and wages, which cannot be offset completely by increased selling price. A few months ago, the buildings were injured considerably by an explosion in the neighbourhood. It is doubtful whether the dividend can be maintained this year. The company has co-operated with the Austrian Lloyd, the Austriawerft, the San Rocco yard and the Atlas Werke (Bremen) in the establishment of the Marinewerke for the construction of marine engines.

G. Seebeck A.G., Geestemunde-Bremerhaven.—The accepted balance sheet for the year ending June 30, 1917, shows a net profit of £40,600 (compared with £31,600 for the preceding year) from which the highest dividend yet reached, 12½ per cent. (10 per cent.), was paid. Including reserve for war profits tax, £18,000 (£12,300) is brought to current account, and £2,170 (£1,530) paid to directors. The allowance for depreciation is £25,900 (£26,900 last year). The company has so far contributed £98,000 to war loans. The assets include: Site, docks and yard equipment, £125,500 (£131,000); buildings, £74,800 (£78,500); engines, &c., £66,200 (£69,900); patterns and furniture, 2s.; machine tools, &c., £9,060 (£9,280); raw materials, £67,200 (£41,900); work in hand, £266,000 (£175,000); securities, £66,800 (£28,100); debtors, £96,400 (£97,400). On the other hand, there are liabilities as follows:—Share capital, £163,000 (unchanged); 5 per cent. bonds, £93,500 (£94,500); mortgages, £12,700 (as before); reserves (unchanged), ordinary, £17,200; special and depreciation reserve, £4,900; creditors, including payments on account, £438,000 (£303,000).

Italian Owners in 1916-17.—The Navigazione Generale paid 10½ per cent. dividend for 1916-17; £11,400 to directors; £2,620 to ordinary reserve; and £236,000 to special reserve in accordance with the law of February 7, 1916. The fleet of twelve steamships (80,377 g.t.r.) was entered in the accounts for June 30 at £1,195,000; and the *Duilio* and *Giulio Cesare* under construction (each of 22,000 tons), at £1,035,000. The *Palermo* and *Stromboli* were war losses; the *Milazzo* and *Volturno* were transferred to the new Transoceanic Company; and the Japanese ss. *Unkai Maru* (8,800 g.t.r.) was purchased and renamed *Stromboli*. The company is interested in the Cantieri ed Officine Meridionale. The total share capital has been raised from £2,390,000 to £4,780,000 by the issue of £1,590,000 fresh shares, and writing up the old shares from £11 18s. to £19 17s. —The Soc. Veneziana di Nav. a Vapore paid 30 per cent. dividend from £205,000 net profit; its share capital has been increased from £199,000 to £596,000, and the company proposes to build its own shipyard, since existing Italian yards are already overburdened with orders. The Soc. Italiana di Servizi Marittime paid 8 per cent. dividend on the fully-paid capital of £396,000. After the loss of the *Torino* and *Bisagno*, the company had sixteen steamships (43,845 g.t.r.), of book value, £405,000. Two liners are under construction for Egyptian service, one being on the slips at Riva Trigoso and the other in Blohm and Voss's hands. The Marittimi Italiana paid 8 per cent. on £358,000 share capital. The book value of the 27 vessels (65,679 g.t.r.) on June 30 last was £476,000.

COMPANY REGISTRATIONS.

Concrete Seacraft, Ltd.—Capital, £12,500, in £1 shares. Objects: To take over the business carried on at Caxton House, S.W., by H. C. Ritchie and W. Black, as the "Concrete Seacraft Company," to take over a contract between the said company and the Admiralty for the construction and delivery of reinforced concrete barges, &c. Signatories:—

E. C. Hannen, 12, Hyde Street, Bloomsbury, W.C., contractor.
W. Black, Caxton House, S.W. 1, engineer.

The first directors are:—E. C. Hannen, W. Black, A. Bicket and H. C. Ritchie, each of whom may retain office while holding 500 ordinary shares. Registered office: Caxton House, Westminster, S.W.1. Private company.

Northern Transport Agency (Manchester), Ltd.—Capital: £1,000, in £1 shares. Objects: shipowners, ship and insurance, brokers, managers of shipping property, freight contractors, &c., Signatories:—

A. L. Bower, St. Helier, Queen's Drive, Wavertree, Liverpool, ship and insurance broker.
Elsie I. MacMahon, 74, Bedford Road, Liverpool, bookkeeper.

The first directors are to be appointed by the subscribers. Solicitor: F. E. Kent, 8, Harrington Street, Liverpool. Private company.

Canal Transport, Ltd.—Capital, £9,000, in £1 shares. Objects: Carriers by land and water, steamboat, tug and barge owners, wharfingers, warehousemen, lightermen, ballast owners, &c. Signatories:—

H. G. Moore, "Tintern," Park Avenue, East Sheen, coal merchant.
H. M. Carter, Aldermans House, E.C., merchant.

The first directors are to be appointed by the subscribers. Qualification: £100 shares. Solicitor: H. S. Holt, 6, Gray's Inn Square, W.C.1. Private company.

Queenborough Shipbuilding Company, Ltd.—Capital, £25,000 in £1 shares (10,000 participating preferred). Objects, to build, fit out, repair and lend money on ships and vessels of all kinds, to construct and repair steam engines, boilers and machinery, to construct and maintain for the use of the company, or for letting out on hire graving and other docks and conveniences for the building, repairing and docking of any such works, to establish at Queenborough or elsewhere a dock or docks with patent or other slips, workshops, building and machinery, &c. Signatories:—

C. B. King, 2, Lowlake Gardens, Surbiton, consulting engineer.
T. E. L. Oakley, 10, Carey Street, W.C., solicitor.

The first directors are: C. B. King and others to be appointed by the subscribers. Qualification, £100. Registered office: Moorgate Station Chambers, E.C. Private company.

QUESTIONS IN PARLIAMENT.

Shipping and Shipbuilding Committee.

In reply to Mr. Runciman, on January 30, Sir Albert Stanley (President of the Board of Trade) stated: The first part of the final report of the Shipping and Shipbuilding Committee signed by all the members has been presented to the Board of Trade. When the whole report has been received the question of publication will be considered.

Engineers on Requisitioned Vessels.

Mr. Watt, on January 30, asked the Secretary to the Admiralty why it was necessary to have as many as nine certificated engineers, six possessing chief engineers' Board of Trade certificates, in addition to other uncertificated engineers, on board vessels under Admiralty requisition, seeing that on the same ship when running for owners' account only seven engineers in all were employed?

Dr. Macnamara: I cannot say whether the facts are as stated, unless my hon. friend will give me the name of the vessels he has in mind. Generally, it has been found necessary to increase the number of engineers in many vessels owing to the closing up of watertight doors, thus isolating machinery compartments. In consequence of this, for the proper supervision of the working of the machinery and boilers, additional engineers have been found necessary. But the whole question of the proportion of certificated to uncertificated engineers to be borne in these vessels has for some time been under consideration, and it has been arranged that an engineer-commander and a marine engineer of experience shall advise the Director of Transports and Shipping on this and other matters.

Awards to Seamen's Dependants.

Answering Mr. Byrne, who asked, on January 30, whether the President of the Board of Trade was aware of the growing discontent amongst sailors and firemen of the mercantile marine, caused by the inadequate sum awarded to their dependants in event of their death at sea, Sir A. Stanley said: I am not aware of the discontent referred to, but am prepared to consider any evidence of grievance which the hon. gentleman may put before me. If he studies the scheme he will see that every captain, officer, and seaman on a merchant ship already has what is in effect free life insurance policy for a considerable sum. The capitalised value of the pension given would, in the case of the higher ratings, exceed the figure of £1,000.

The Port of London.

Mr. Gilbert, on January 30, asked the Parliamentary Secretary to the Shipping Controller whether the Government proposed to close the Port of London; whether his attention had been called to the recent diversions of ships from the Port of London; and would he consider that, in view of the importance of London as a food distributing centre, all facilities should be given, so that every food ship that was possible should be allowed to enter London's port?

Sir L. C. Money: The Government does not propose to close the Port of London. For reasons of safety, the western ports have lately been used to a relatively greater extent than the eastern ports, but the dependence of London upon seaborne supplies is fully appreciated, and the Port of London will continue to be used to the fullest extent which is consistent with the safety of the national supplies.

Mr. Gilbert: Will the Government consider the question that vessels coming to London shall have convoy facilities equal to those accorded to vessels going to western ports?

Sir L. C. Money: My hon. friend has had the advantage of a private conference between the Ministry of Shipping, the Shipping Controller, and the head of the Anti-Submarine Department, and leading members of the Admiralty, and therefore he knows that the suggestion made in his question is without foundation. (Cries of "Withdraw!" "Apologise!"). I withdraw that. I will only say that the hon. Member knows that the suggestion in his question to give equal protection, in given circumstances, is in accordance with the views of the Admiralty.

Mr. G. Lambert: Is it due to this diversion of traffic that there is such a scarcity of food in London?

Sir L. C. Money: It is perfectly true that the necessary divergence of traffic caused difficulties with regard to certain supplies, but both the Admiralty and ourselves are endeavouring to bring every ship they possibly can with supplies for London, under the given circumstances, under Admiralty protection.

Mr. Rowlands: Supposing many ships are diverted from London, can the Government see their way to providing transport facilities to bring food supplies into the metropolis at the present time?

Sir L. C. Money: That is also under most careful consideration, and we are constantly in touch with the Railway Executive, and a Committee has been set up to endeavour to solve the difficulties.

Mr. Pringle: Has the diversion which has actually taken place been decided on without any real consideration of the transport facilities?

Sir L. C. Money: No, Sir. It was absolutely necessary to make certain diversions, and the whole inland transport was most carefully considered. It is a question of balancing advantages and disadvantages, and we have done our best to meet the situation.

Mr. Houston: Did General Pringle intimate to the Port of London Authority the intention of closing the port, and had it not been for these protests it would have been done?

Sir L. C. Money: I have not heard that statement made, but if it was it was under a misapprehension.

Mr. Runciman: As this is a matter of great importance, will the Leader of the House, as representing the War Cabinet, prevent any further diversion of food ships from the Port of London without full consultation having been made, not only with the Railway Executive Committee, but also with the Port and Transit Committee?

Mr. Bonar Law: I quite realise the importance of the point raised by my right hon. friend. I can assure him that no diversion will take place—and I state this after consultation with the Shipping Controller—which is not rendered absolutely necessary by the protection of ships. The question of railways has, of course, to be dealt with simultaneously, and a great deal is being done to secure that the supplies come through.

Losses in Irish Sea.

Mr. Byrne asked the Secretary to the Admiralty, on January 31, what was the number of lives lost on the City of Dublin boat which was sunk on the morning of January 26?

Dr. Macnamara: I deeply regret to say that on the occasion referred to the lives of seven passengers and five of the crew were lost. The passengers lost consisted of five men and two women; and of the crew, two seamen, two firemen, and one stewardess, were lost.

Mr. Clancy asked whether the right hon. gentleman had been made aware of the dangers from submarine attack to the City of Dublin mail steamers plying between Kingstown and Holyhead; and, if so, whether he had taken steps to safeguard those boats?

Dr. Macnamara: We are fully aware of the dangers referred to; and as regards the second part of the question, the subject is constantly engaging the attention of the Admiralty, and so far as our resources admit, every possible step is taken to provide for the safety of the cross-Channel traffic.

Mr. Clancy asked whether the recent sinkings in the Irish Channel of Irish cargo boats, with the resulting loss of food cargoes and human lives, had been brought to his notice; and whether, in view of the fact that those sinkings were the result of insufficient protection being afforded against submarine attacks, despite repeated warnings to the Departments concerned, he would take such steps as might be necessary for safeguarding the cargo routes between Ireland and Great Britain?

Dr. Macnamara: The recent sinkings and their consequences of the loss of lives and of food cargoes, are deeply regretted by the Admiralty. Every attention is devoted to ensuring the safety of these vessels, and every possible step is taken with this object. This, of course, is equally true with regard to all merchant shipping whilst at sea, and all our available resources are used to the utmost extent.

Answering Mr. Field, who asked, on February 1, whether the meeting held in the Mansion House, Dublin, respecting the necessity of providing protection for ships engaged in cross-Channel transit, had been brought to his notice, Dr. Macnamara said: I have received a copy of the resolution passed at the meeting. It is manifestly impossible to state what are the measures taken for the safety of this traffic, but most careful attention is devoted to this question, and all the available forces are used to safeguard the traffic in the Irish Sea.

Loss of Liverpool Pilots.

Mr. Houston, on January 31, [illegible] President of the Board of Trade whether [illegible] sunk by enemy action inside the Mersey Bar lightship on the morning of December 28, when nineteen Liverpool pilots and a number of pilot apprentices lost their lives, was, at the time she was sunk, acting as Government

examination boat for the port of Liverpool as well as a pilot boat; and what scale of compensation and pensions would be given to their dependants and relatives?

Sir A. Stanley: I am aware that the vessel referred to was acting as an examination boat at the time she was sunk. Compensation will be granted to the dependants of the pilots and pilot apprentices in accordance with the scheme, of which I am sending particulars to the hon. Member.

Argentine Freights.

Sir A. Williamson, on January 31, asked the Parliamentary Secretary to the Shipping Controller whether he was charging 120s. per ton freight on coal out to Argentina and only about 57s. per ton on wheat home; whether he had received any representations from the Argentina railway companies regarding the former charge; whether the freight on coal out was usually very much lower than the freight on wheat home; and whether he would reconsider the rates with a view to a just apportionment?

Sir L. C. Money: The freight charged on wheat, which, as in the case of all Government cargoes, is based on cost of running at Blue Book rates, is not 57s. but 100s. There is, therefore, not the wide discrepancy which my hon. friend had supposed between that rate and the rate on coal outwards. Moreover, as the latter is a commercial rate arranged with the railway coal pool, no comparison could, I think, properly be made between the two, and it is not proposed to make any change.

Sir A. Williamson: Does the hon. gentleman suggest that because the rates are accepted they are therefore justified when they are accepted under compulsion, and, furthermore, if it is to cheapen food, why does he fix the rate at its present rate?

Sir L. C. Money: The rates on Government cargoes are purely cost rates, and, moreover, they are discounted by any receipts from voyages out.

Marine Losses in 1917.

Answering Mr. Houston, on February 5, Sir L. C. Money said: British vessels of 1,600 tons gross and over regarded as losses by marine risk and reported during the 12 months ended December 31 last number 69, with a tonnage of 245,559 gross register.

Coal Exports to France.

In reply to Mr. Outhwaite, on February 5, Sir L. C. Money said: The cost of carrying coal to France by British ships not requisitioned varies according to the ports of shipment and discharge and the different classes of vessels. For a steamer of 1,500 tons deadweight the maximum voyage freight from Cardiff to Rouen is 24s. 6d. and from the Tyne to Rouen 27s. 6d., so that the cost of coal delivered at Rouen from these centres may be taken as being between 53s. and 60s. a ton. A great proportion of the coal carried to France, however, is transported by means of neutral ships under time charter, and the cost is necessarily much higher.

Dublin Steam Packet Service.

Mr. Clancy, on February 5, asked the Parliamentary Secretary to the Shipping Controller, why leave was not given for the lodgment of the specifications for the construction of the steam packet *Connaught*, proposed to be built by the City of Dublin Steam Packet Company; and whether, unless leave was given without further delay, the company would be seriously crippled in its efforts to maintain the mail service or to compete for a renewal of its contract.

Sir L. C. Money: The question of the replacement of the *Connaught* is still under consideration. I may point out that even if specifications for a new vessel were lodged, the matter would not be forwarded, since the vessel would not be of a type to which priority could be given at this time, when the urgent need of the nation is for cargo tonnage of the simplest type.

Refrigerated Tonnage.

In answer to Mr. W. Thorne, who asked on February 5 whether the greater portion of our food difficulties had arisen through mishandling of our refrigerated fleet arrangements and disregard by the War Office, Admiralty and Board of Trade of civilian requirements, and whether the Ministry of Shipping was prepared to institute a departmental inquiry into the management of the refrigerated fleet, Sir L. C. Money said: I know of no grounds for the suggestion made in the question and do not consider that a departmental enquiry would serve any useful purpose. My hon. friend will be aware that the present difficulties with regard to the meat supply do not mainly arise from deficiencies in imported meat.

Shipbuilding as National Service.

In answer to Mr. Hogge, on January 31, Sir Auckland Geddes enumerated the occupations in which discharged soldiers would be regarded as undertaking work of national importance. Amongst the occupations mentioned were shipbuilding, ship-repairing, marine engineering, munitions, and iron ore mines.

Labour Lost for Shipyards.

Mr. Carew, on January 30, asked the Parliamentary Secretary to the Ministry of National Service, whether he was aware of the waste of time and money incurred by sending a large number of war-work volunteers to Glasgow this month, for shipbuilding purposes, when on arrival there was no possibility of obtaining lodgings, and they were told to return home; and whether these men sent from all parts of England would be paid for their loss of time?

Mr. Beck: I am aware that certain difficulties in connection with accommodation occurred in connection with certain men sent to Glasgow for shipbuilding work. The claims from the men in question are now under consideration. The necessary steps have been taken to avoid such difficulties in the future.

Advances of Wages on the Clyde.

Mr. Watt asked the Secretary to the Admiralty, on January 31, whether he was aware that advances of wages paid to workmen engaged on Admiralty work on the Clyde by the order of the Committee of Production, the total of which was agreed upon six months ago, had never yet been paid; and would he see that the money was remitted without further delay?

Dr. Macnamara: I do not know whether my hon. friend is referring to the Committee on Production's award of a war bonus of 3s. on August 1 last; another war bonus of 5s. was, of course, awarded in December last. I can scarcely believe that in either of these cases the money has not been paid. But if my hon. friend will give me particulars of any case in which it has not been paid, the matter shall be dealt with at once. I gather from my hon. friend that it is the sub-contractor and not the men who have not been paid. If he will let me have particulars, I will go into the matter at once.

Mr. Watt asked whether the right hon. gentleman was aware that in the cases dealt with by the Committee of Production last year, wherein advances were granted to workmen engaged on contracts for his Department and such advances were loyally paid by sub-contractors to their workmen engaged on Admiralty work, that the shipbuilders and others, particularly on the Clyde, contracting direct with his Department, were refusing to forward to him the sub-contractors' claims for those advances paid whereby these sub-contractors were unable to recover the extra wages paid; and would he indicate some method by which these sub-contractors could recover these advances paid?

Dr. Macnamara: In some few cases the Admiralty is aware that sub-contractors have experienced difficulty in obtaining a refund of the advances in wages granted to their workmen by the Committee on Production, and paid by them in accordance therewith. It is not possible to say, from my hon. friend's question, whether the sub-contractors whom he has in mind have made representations direct to the Admiralty. If they have not done so, I suggest that they should at once communicate to the Admiralty details of their case, when the matter will be at once investigated on its merits.

PORT NOTES.

Valparaiso.—According to the Chief Government Inspector, the construction of port works in Valparaiso is proceeding so satisfactorily that it is believed the contract will be completed before the end of next year. It is now proposed to extend the facilities, so as to give the breakwater a length of 3,500 ft., and provide complete shelter for the Bay.

Lagos.—An Ordinance which came into force on January 1, authorises the levying of dues on cargo and passengers entering and leaving the Harbour of Lagos. The Lagos Harbour Dues Ordinance (No. 9 of 1910) of Southern Nigeria and the Ordinances amending the same are repealed. The scale of dues is on the basis of 3s. for first and second-class passengers, 1s. 6d. for passengers of her class, and 4s. for every ton of cargo.

Dakar and Rufisque.—An Order of the Governor-General of French West Africa, making Regulations relative to the Ports of Dakar and Rufisque in war time, provides that the master of any French or foreign vessel arriving at Dakar or Rufisque must furnish the port authorities with particulars of the identity of all persons on his ship (crew and passengers); and prohibits the carriage of clandestine correspondence and the use of "wireless" apparatus while a vessel is in port.

NEWS PARAGRAPHS.

State Marine Insurance.—It is stated that the Government have decided to abandon flat rates of premium for war insurance on cargo, and to substitute a system of rates varying according to the voyages.

Brazilian Fleet for Europe.—A Reuter message from Rio de Janeiro states that Admiral Pronti has been appointed Commander-in-Chief of the Brazilian Fleet which is to co-operate with the Allied Fleet in European waters.

German Submarine Cruisers in Atlantic.—A wireless message from Madrid states that steamers coming from the Dakar route (West Africa) report the presence of German submarine-cruisers of 2,000 tons. The seas off Morocco, Madeira, the Canary Islands, and the Cape Verde Islands are also being traversed by U-boats.

Fire at American Shipyard.—At a fire which recently occurred at Newark, N.J., 400 yards of the quay were destroyed, together with several barges and freight cars. Firemen and soldiers succeeded by the prompt use of dynamite in preventing the fire from spreading to the great wooden ways on which new ships were being built.

"Great American Insurance Company."—William H. McGee & Co. have been appointed general agents for the marine department of the Great American Insurance Company of New York. The company has hitherto only written fire and kindred classes of insurance. Through McGee & Co. it will now write marine, war risk, hull and cargo lines, &c.

Pangbourne Nautical College.—The number of cadets at the Nautical College at Pangbourne for the new term, which began on January 16, is more than double the number admitted in the previous term, 77 cadets being now in training, as compared with 36 last term. The special training class for the Royal Naval Reserve has begun its work of preparing candidates for the nominations to Dartmouth granted by the Admiralty.

Glasgow Shipowners' and Shipbrokers' Benevolent Association.—The annual report shows that the funds increased during the past year from £9,082 to £14,520—a net gain of £5,438. The sum of £5,000, which was raised as the result of a special appeal by the president (Mr. R. J. Dunlop), was invested in War Loan. Nineteen new members were admitted during the year, and six died—two of them on active service.

West African Freights.—Notice has been given by the African Steamship Company and the British & African Steam Navigation Company that revised rates to and from West African ports would come into operation as from January 31. It is understood that the new rates represent advances of about 40 per cent. on those now current, and that some of the new rates are more than double those ruling before the war.

Merchant Seamen and Germans.—Mr. Havelock Wilson, speaking at Plymouth recently, said that if pacifists wanted to go to Stockholm or Petrograd they would have to get conscientious objectors to man the ships to carry them. The Merchant Seamen's League were determined to boycott Germans after the war; but if Germans established a decent Government and did away with the Kaiser they might consider a mitigation.

Thames Boating Trades Association, Ltd.—The annual meeting was held on January 23, and according to the report of a contemporary the association was holding its own under adverse conditions; although the war had seriously affected the trade, new outlets for energy had been created. The annual report was quite satisfactory, and also the balance sheet. There had been correspondence with the Thames Conservancy regarding the letting of boat-lay-keepers, and at the request of the Conservators the matter was postponed until after the war. It was, however, intended to press the matter on the first favourable opportunity. The meeting was followed by a social re-union.

British Westinghouse Employees War Relief Fund.—The statement of receipts and payments of the fund from August 22, 1914, to December 31, 1917, shows that of the total of £59,008 contributed to December 31, 1917, the sum of £33,417 has been contributed by the employees, and £16,591 by the company. Out of the sum, £21,301 has been paid to dependants, £12,031 set aside for a Disablement and Dependants Fund, and £2,479 has been spent in donations to local and national funds and Christmas gifts. The number of families in receipt of weekly relief is 757, and the number of employees who have joined His Majesty's Forces is 3,100. It is stated with regret that the casualties are exceedingly high.

Cunard Office at Vancouver.—It is reported that the Cunard Line have established an office in Vancouver, and are making preparations to run a Pacific service when war is over.

Port of London Authority.—With a view of assisting the social work of the British and Foreign Sailors' Society, the Port of London Authority have granted sites for the erection of eight small buildings to be used as distributing centres at the various river entrances at the docks.

Concrete Submarines.—*Schiffbau* says that certain Norwegian journals wishing to "boost" concrete vessels, are spreading the report that the latest German submarines are of reinforced concrete construction. Someone with time to spare might do worse than figure out the possibilities of reinforced concrete in this connection.

Award for Gallantry.—Sir W. H. Seager recently presided at an interesting function on the Cardiff Exchange, when Commander F. M. Maine, D.S.O., officer in charge of the Defensive Armaments, Bristol Channel, presented the Distinguished Service Medal to Gunner Arthur Phillips, of Cardiff, awarded for gallantry in connection with the sinking of an enemy submarine, the engagement with which lasted three hours.

Maximum Freights in Coasting Trade.—The Shipping Controller announces that he has approved schedules of maximum freights for coal, ore and limestone carried coastwise. This schedule, particulars of which may be obtained on application to the Ministry of Shipping, came into operation on February 1. All charters and freight contracts entered into on and after that date must conform to the new scheme. It is intended shortly to extend the scheme to other commodities.

Conversion of Interest.—We have received the following notification:—The business of David Rowan & Co., engineers and boiler makers, 231, Elliot Street, Glasgow, was transferred by the subscribers, to David Rowan & Co., Ltd., as at December 31, 1916, when the subscribers' interest in the business ceased. David Rowan & Co., Ltd., will continue the business in the same premises, under their own name and on their own account. They will collect all the assets and discharge all the liabilities of the firm of David Rowan & Co.

Shipbrokers' Benevolent Society.—Mr. Howard Houlder, presiding at the annual meeting last week, said there had been a slight falling off in subscriptions, but although the financial position was sound he was issuing a special appeal to the many shipowners and brokers in London who had not yet become annual subscribers. The committee had continued to make extra quarterly gifts to meet the extra cost of living and had spent £285 in that way during the year. The total allowances granted in relief amounted to £1,576, and the expenses were only £57. Mr. Houlder was re-elected chairman and Mr. Walter Ellis honorary secretary.

Rewards for Gallantry.—Mr. Johan Vogt, Consul in Liverpool for Norway, has notified the secretary of the Mercantile Marine Service Association that with respect to the great gallantry shown by the captain and crew of the British steamship *Rathlin Head* in rescuing a crew of 16 men from the Norwegian barque *Sara* in November, 1916, the Norwegian Government has made the following awards: To Captain Orr and mate, Dudley Moore, of the *Rathlin Head*, a piece of silver with inscription; and a "medal for noble deed," in silver with diploma to the assisting first mate, Hill Wilson, second mate Samuel Sloan, and five other members of the crew. The rewards will be handed to the Board of Trade for presentation.

Shipbuilding in Japan.—According to our American contemporary, *Shipping*, the Suzuki Shoten Gomei Kaisha, of Kobe, has decided to start a shipbuilding yard on a large scale. The firm has bought up the Harima Dockyard Company, near Naba, and the Toba Shipbuilding Yard in Shima Province. The Harima Dockyard lately increased the number of its building slips to five, and two vessels, one of 4,000 tons, and another of 1,800 tons, have already been launched there. At present two steamers, of 95 tons and 1,200 tons respectively, are in the course of construction. At the Toba shipbuilding yard three steamers, of 1,200 tons each, are being built. The Suzuki Shoten Gomei Kaisha is reported to have decided to construct 26 steamers, aggregating 122,200 tons, at the Harima dockyard, and four steamers of 6,400 tons at the Toba shipyard. At the Harima dockyard the following are to be constructed: Eight steamers of 1,200 tons gross, two of 5,000 tons, two of 3,000 tons, [illegible] of 1,800 tons each. At the Toba [illegible] of 1,800 tons each, [illegible] built.

OFFICIAL NOTICES AND SHIPS FOR SALE.

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Telegrams: "SPARDECK."

GENTLEMAN, 32—has new process for manufacture of copper tubes, every shape and section, in one operation as thin as 36 gauge, also expert in galvanizing zinc process termed sherardising but own improved method, bolts, nuts, nails, rivets, steel cable, anything iron or steel everlastingly rustproof; expert also in copper and lead plating by electrolysis—seeks co-operation in immediately doing work for ships. Advertiser also has provisional patent standardised ships, vastly superior concrete with speedier output possibilities immediately seen. Replies only required from those with position and temperament who can at once say "Yes" or "No." Newman, "Lane End," Dollis Hill Lane, Cricklewood, N.W. 2.

FOR SALE.

ALL Wrought Turntables, 42" Tables, ¾" thick, 20" and 24" Gauge, large quantities. Apply to the Standard Range & Foundry Co., Watford.

WANTED.—Copies of *Shipbuilding and Shipping Record* for January 13, 1916, and July 5, 1917. Barclay, Curle & Co., Ltd., 36, Finniestoun Street, Glasgow.

TO SHIPBUILDERS.—Naval Architect, with good Drawing Office and Yard experience of cargo boats, trawlers, small warships, &c., desires position as Assistant Outside Manager. Accustomed to energetic supervision of construction. Box 44, c/o *Shipbuilding & Shipping Record*, Queen Anne's Chambers, Westminster, London, S.W. 1.

OFFICIAL NOTICES AND SHIPS FOR SALE.

OFFICIAL ADVERTISEMENTS intended for insertion on this page should be sent in as early in the week as possible. The latest time for receiving official advertisements for this page for the current week's issue is noon on Wednesday.

All advertisements should be addressed to—
Shipbuilding and Shipping Record,
Queen Anne's Chambers,
Westminster, London, S.W. 1.

"SHIPBUILDING AND SHIPPING RECORD" TABLE OF SHIP SALES.

Name and Type.	Tonnage.	Dimensions. Draught in ( ).	Sold by, to	Builders, hull and year.	Machinery and builders.	Remarks.
Georgian Prince, ss. (spar dk.)	3,245 gr. 2,078 net 4,709 d.w.	328′ × 42′ × 20′ (22′ 11″)	Prince Line, Ltd. (Furness, Withy & Co.), Newcastle, to one of the subsidiary companies of the Anglo-Persian Oil Co.	Armstrong, Mitchell & Co., Newcastle (1893)	24, 40, 65 × 42 (Blair & Co., Stockton)	Price about £475,000.
Mexican Prince, ss. (spar dk.)	3,028 gr. 1,953 net 4,321 d.w.	328½′ × 41′ × 19½′ (22′ 3″)	Prince Line Ltd. (Furness, Withy & Co.), Newcastle, to one of the subsidiary companies of the Anglo-Persian Oil Co.	C. S. Swan & Hunter, Newcastle (1893)	23, 38, 62½ × 42 (Blair & Co., Stockton)	
Roumanian Prince, ss.	4,147 gr. 2,577 net	357½′ × 48½′ × 28½ (23′ 3″)	Prince Line, Ltd. (Furness, Withy & Co.), Newcastle, to one of the subsidiary companies of the Anglo-Persian Oil Co.	Tyne I.S.B. Co., Newcastle (1913)	25, 42, 68 × 48 (Wallsend Slipway Co., Newcastle)	
Russian Prince, ss.	4,158 gr. 2,584 net 6,000 d.w.	357½′ × 48½′ × 28½′ (23′ 9″)	Prince Line, Ltd. (Furness, Withy & Co.), Newcastle, to one of the subsidiary companies of the Anglo-Persian Oil Co.	Tyne I.S.B. Co., Newcastle, (1912)	25, 42, 68 × 48 (Wallsend Slipway Co., Newcastle)	
Kingfield, ss. (single dk.)	3,028 gr. 1,930 net 5,400 d.w.	325′ × 47′ × 22½′ (21′ 8″)	Field S.S. Co., Stockton, to Trechmann Bros., W. Hartlepool	Richardson, Duck & Co., Stockton (1910)	23, 38, 62½ × 42 (Blair & Co., Stockton)	—
Sterndale, ss. (single dk.)	2,925 gr. 1,808 net	331′ × 47½′ × 20½′ (20′ 7″)	J. C. Gould & Co., Cardiff, to buyers not stated	Richardson, Duck & Co., Stockton (1910)	24, 40, 65 × 42 (Blair & Co., Stockton)	Price about £95,000. Sold last August for about £85,000.

Mishap in Keel-up Launch.—*Beton II*, the second 200-ton concrete motor lighter built for the Bjaaland firm, Skien, by the Porsgrund Cementstoperi, had an unfortunate experience during launching. Like the sister vessel, this boat was launched keel upwards, but the cradle did not detach itself. The vessel was towed into shallow water where it sank, keel upwards. Subsequently the cradle was released and the vessel salved, undamaged.

Norwegian Chamber of Commerce.—The newly-formed Liverpool District Advisory Committee of the Norwegian Chamber of Commerce in London has just held its first meeting, and elected Mr. Johan Vogt (Norwegian Consul in Liverpool), to be chairman, and Messrs. K. W. E. Evans, J. Parke Jackson, and Henry Tyrer to form an executive or working committee. Mr. Vogt was also elected to represent the Liverpool branch on the Council in London. This trade branch, which has met with such signal success since its inception, will be a potential means of developing trade relations with Norway at the conclusion of the war.

Liverpool Shipwrights' Society.—Mr. Charles Booth, of the Booth Line, in presiding over the annual concert of the Liverpool Shipwrights' Trade and Friendly Society last week, observed that during the last five years he had been present at a very large number of meetings between members of the employers' association of the port and representatives of trade union organisations, and his experience had been that nothing but good resulted from those frequent meetings they had had. One of the things that had impressed him very strongly was the great ability and knowledge that was displayed by the trade union representatives. He was satisfied that, so far as the shipping and ship repairing trades of that port were concerned, the relationship between the employer and the employed had improved, and they would have improved much more but for the war, that had necessarily involved a great deal of Government interference, and which had not tended in the direction that was hoped.

The Fuel Problem in Norway.—Wood has been used as fuel on the larger steamships of Norwegian coastal lines for some time past, and considerable delays have been occasioned by the necessity of taking on fresh supplies at frequent intervals. Most of the companies have bought stocks for the winter and some are felling timber on their own account. Mixtures of coal, wood shavings and peat are used on the smaller fjord steamships. The gross profit of the Helgelandske Dampskibsselskab is ascribed principally to the use of sawdust as fuel.

Standard Ships in Scandinavia.—The production of standard ships in Scandinavian countries has developed naturally from the great demand for new tonnage during the war. Yards inundated with orders found that the simplest way to obtain maximum output was to concentrate on a number of identically similar vessels. Even so, deliveries were soon booked for years ahead. One Norwegian yard has already delivered or on order 20 vessels of one type; and several Swedish yards have completed or in hand series of five to eight similar vessels. The Finnboda yard decided recently to develop a standard motor ship for North European service, and its example has been followed by the Bergsunds yard (Stockholm), which is bringing out a standard cargo steamship of 1,100 tons d.w. for Baltic service.

FORTHCOMING EVENTS.

SHIPBUILDING, ENGINEERING AND STEEL COMMERCIAL STAFFS' ASSOCIATION.—Tuesday, February 19, meeting in the Church Institute, Newcastle, at 7.15 p.m. Lecture by Mr. G. F. McGregor on "Shipbuilding Cost Accounts and their Relation to Management, Estimating and Accountancy."

INSTITUTE OF MARINE ENGINEERS.—Tuesday, February 12, meeting at the Institute, the Minories, Tower Hill, London, E.C., at 6 p.m. Paper by Mr. W. W. Houfe (member), on "Retirement Provision for Marine Engineers."

SHIPPING SHARE MARKET.

There has been active business in the shipping stock and share markets throughout the week, with considerable lines changing hands. Reports of impending amalgamations are still current, although denial and counter-denial follow affirmation of different companies' intentions. The latest official denial is in respect to the Moor Line. There is said to be no truth in the story that a French firm had, through South Wales intermediaries, purchased the Moor Line at a cost of about two and a quarter million pounds sterling, but it is admitted that the directors are contemplating the sale of the steamers, and proposals will shortly be placed before the shareholders. There are also several reports current in the market regarding Manchester liner shares, in which an average of about twenty bargains a day have been "marked" for some time past, the £10 shares rising, under the influence of persistent buying, from 33 to 47. On the basis of last year's dividend of 25 per cent., the yield is only £5 6s. 5d. per cent., which, it is contended is too low to be the object for which buyers are appearing in the market. There was no indication in the speech of the chairman at the last shareholders' meeting in October, that any impending development was taking place. The financial position is, of course, very strong. Unlike many of the shipping companies, the directors have not sought to replace lost vessels, but have invested their surplus profits in War Loan, and now have a reserve of £270,000, apart from the large sums written off for depreciation. Another report which may be mentioned with reserve is that conversations have taken place respecting a proposed sale of the British Lines of the International Mercantile Marine Company, including all the assets, to a British syndicate, the price suggested being £25,000,000. In this connection, it has been observed that dealings have taken place recently in the debentures of the Oceanic at high prices. The foregoing reports have naturally tended to strengthen all shipping companies' issues during the past week, especially as the opinion is gaining ground that the Shipping Controller will consent to a revision of the Blue Book rates of hire for cargo vessels.

SHIPPING, SHIPBUILDING, ENGINEERING AND MARINE INSURANCE SHARE LIST.

SHIPPING.

Name.	Share and paid.	Extreme quotations, 1917.	Last ann. div. % or per share.	Yield. %	Last Quotation	Rise or Fall.
	£					
African S.S.	20	30½—25½	10	7½	28	
Allan Line ... ... Deb.	100	—	4	4½	92	
Anchor Line ... Cum. pref.	10	9½—8½	5½	5½	9¼	
Do. ... ... Deb.	Stk.	105½—102½	4½	4½	103	
Argentine Nav. ... Cum. pref.	1	25/—14/3	Nil.	Nil.	22/9	— -/9
Do. ... ... Ord.	1	20/6—6/6	Nil.	Nil.	16/3	
Australasian Un. S. Nav. Deb.	Stk.	80½—79½	4	5	81xd	
Belfast Steam ... ... "A"	10 (5pd.)	5	5	5	5	
British & Argen. Nav. ... Deb.	Stk.	84—80	4½	5½	81	
British India Nav. ... Deb.	Stk.	84—82	4½	5½	81	
British S.S. Invest. Trust Def.	Stk.	460—344½	50*	11½	430xd	
Do. ... ... Pref.	Stk.	105½—104	6	5¾	102xd	
Do. ... ... Deb.	Stk.	74½—70	4½	6½	72xd	
Cairn Line ... ... Deb.	Bds.	94—90	5	5½	90½-91	
Do. ... ... "A" Ord.	1	51/6—40/9	20†	8	57/-	+ 8/9
Clan Line ... ... Ord.	10	55½—26½	25	5½	50⅜	+ ⅜
Court Line ... ... Ord.	£1	40/6—29/6	20	10	40/6	+ 1/9
Cunard SS. ... ... Ord.	1	85/—63/9	20*	5	89/-	+ 4/6
Do. ... Cum. pref.	Stk.	97½—82	5	5½	86¼	+ ¼
Do. ... ... Deb.	Stk.	100—93¾	4½	4½	92¼	— ¼
Elder Line ... ... Deb.	Stk.	95—89	4½	4½	103	
Elder Dempster ... Cum. pref.	1	19/—17/-	5⅜	6½	19/1½	
Do. ... ... Deb.	Stk.	89—85	5	5½	85xd	
Ellerman Lines ... Pref. Ord.	10	9½—8½	6½	6½	9½xd	
Do. ... Guar. pref.	10	9—8½	4½	5½	8½	
France Fenwick ... Cum. pref.	5	95/3—85/-	5⅜	6¼	87/6	
Furness, Withy ... Ord.	1	60/9—41/6	20*	6½	64/-	+ 3/2½
Do. ... Cum. pref.	10	9¾—7½	5	5½	8½	
General Steam Nav. ... Ord.	1	24/9—21/6	10	7½	23/6	
Do. ... ... Pref.	1	19/4½—15/-	5	6¼	16/-	
Houlder Line ... Cum. pref.	5	82/6—75/-	5½	6½	77/6xd	
Do. ... ... Deb.	Stk.	—	4½	4½	91xd	
Houlder Bros. ... Cum. pref.	5	—	5⅜	6¼	4	
Do. ... ... Deb.	Stk.	—	4½	5⅜	82	
India Gen. Nav. & Rly. ... Ord.	10	11¾—8½	6	5½	11	
Indo-China N. ... Pref. Ord.	5	97/6—87/6	6	6¾	97/6	
Irrawaddy Flotilla	40	—	15	5	120	
Khedivial Mail ... ... Ord.	1	40/—24/-	20	12½	36/-	— -/6
Do. ... ... Pref.	5	76/3—70/-	5⅜	7½	73/9	
Do. ... ... Deb.	Stk.	95⅜—93	4½	4½	93xd	
King Line ... ... Ord.	1	42/6—31/6	16*	9½	48/-	+ 5/-
Lamport & Holt ... Cum. pref.	£1	20/4½—18/-	6	6	19/-	— -/6
Leyland (F.) ... Cum. pref.	10	8¾—7½	5	5⅞	8⅝	
Mercantile SS. ... ... Ord.	5	30¾—15	40	8	30½	
Do. ... ... Pref.	1	21/—15/9	5	6½	21/-	
Moor Line ... ... Ord.	10	35—20	30	13½	35	
Nelson Steam Nav. ... Deb.	100	—	5	5⅛	98⅝	
New Zealand ... ... Ord.	£10	—	8	2½	32½	
Do. ... ... Deb.	Stk.	87½—86⅝	4	4⅝	88⅝	
Nitrate Producers SS. ... Ord.	5	25⅛—20	30	6½	24⅝	
Do. ... Cum. pref.	5	100/—90/-	5	5	5	
Oceanic Steam. Nav. ... Deb.	100	98⅛—84	4½	4½	94xd	
Orient.Stm.Nav.Co. Cum. pref.	10	9½—8⅛	5	5½	8¾	
Do. ... ... Deb.	100	92—88	4½	5⅛	88	
P. & O. S. N. ... Cum. pref.	100	93¾—84	5	5⅜	91½	
Do. ... ... Def.	100	342—295	18	5½	342	+ 3
Do. ... ... Deb.	Stk.	65⅜—63½	3½	5½	63⅝	+ ⅜
Prince Line	1	6¼—3/-	30	5⅛	118/-	
R.M.S.P. ... ... Ord.	100	125—109½	7	6	124½	+ 1½
Do. ... ... Pref.	Stk.	85⅜—80	5	6	85	
Do. ... ... Deb.	Stk.	86—79	4⅜	5⅛	84⅛	+ ⅛
Shaw, Savill & Alb. Cum. pref.	5	87/6—80/-	5½	5⅝	85/-	
Shell Transport ... ... Ord.	1	6½—96/3	35*	6½	5⅝	
Do. ... Cum. pref.	10	9½—9⅛	5	5½	9⅛	
Sutherland SS. Co.	£1	75/—50/9	30	8	80/3‡	
Union-Castle SS. ... Cum. pref.	10	7¾—7½	4⅜	6	7¾xd	
Do. ... ... Deb.	Stk.	90—86	4	4⅜	90	
West Hartlepool ... ... Pref.	10	7¾—7⅜	5⅜	6⅜	8¼	+ ⅛

INSURANCE.

Alliance	20 (2·4 pd.)	10⅜—9	12/-	7	9⅛	+ ⅛
London Assurance	25 (12½ pd.)	60⅛—48⅜	20	6	59½	
Merchants' Marine Insurance ...	10 (2½ pd.)	10⅜—6½	10	6	10⅛	
N. British & Mercantile ... Ord.	25 (6½ pd.)	36—29	40/-	6½	34½	
Phœnix Assurance	10 (1 pd.)	7⅛—6	40	7	6¾	+ ⅛
Royal Exchange Assurance ...	Stk.	241½—187	10	4½	240½	
Sea Insurance	10 (2 pd.)	27½—24⅜	10	6	27	
World Marine, Limited ...	5 (2 pd.)	6¾—55/-	5	4½	6	

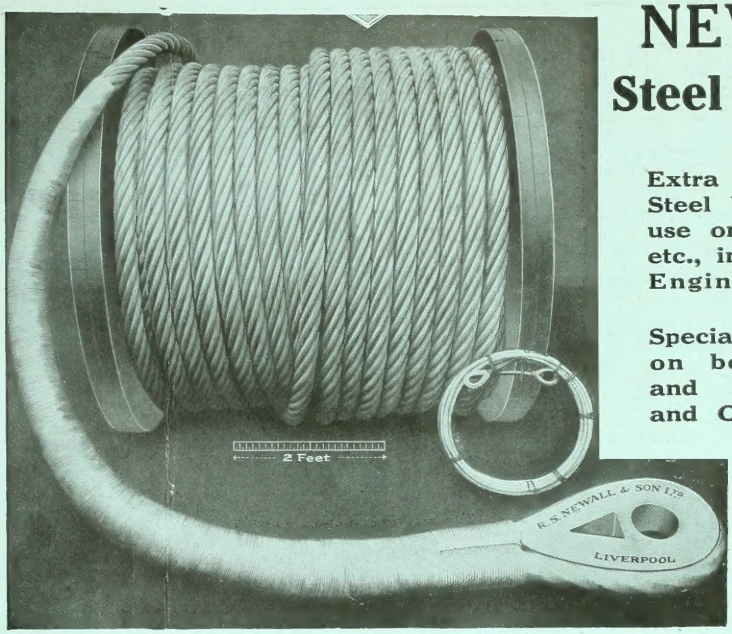
IRON AND STEEL.

Name.	Share and paid.	Extreme quotations, 1917.	Last ann. div. % or per share.	Yield. %	Last Quotation	Rise or Fall.
	£					
Babcock & Wilcox... ... Ord.	1	68/—52/6	15	4½	64/4½	+ -/4½
Baldwins ... ... Cum. pref.	1	20/—15/-	5½	5⅜	20/-	
Do. ... ... Deb.	Stk.	84—82	4½	5⅜	84xd	
Bayliss, Jones ... Cum. pref.	1	—	5	7¼	1⅛	
Bell Bros. ... ... Cum. pref.	10	10—9½	6	6	10⅛	
Do. ... ... Deb.	Stk.	80—73¾	5	6¾	75½xd	
Bessemer (Henry) ... Cum. pref.	20	17½—16¾	5	5½	17	
Cargo Fleet Iron ... ... Ord.	1	24/9—17/3	3	2⅜	27/-	+ 1/9
Do. ... ... Deb.	100	84—81½	4½	5⅜	82xd	
Consett Iron Co. ... ... Ord.	1	36/3-24/10½	50	11	30/-	
Dominion Iron & Steel	Bds.	8⅝—7⅛	5	7	7⅛	
Dorman, Long ... ... Ord.	1	50/—30/9	8†	—	39/6	— -/6
Do. ... ... Deb.	Stk.	—	4	5½	71xd	
Ebbw Vale Steel & Iron Ord.	1	30/6—24/6	12½	9	28/9	+ -/3
Guest, Keen & Nettefids Ord.	1	89/—62/6	15*	3⅜	85/6	
Do. ... ... Cum. pref.	5	5⅜—5	5	4½	5⅜	
Do. ... ... Deb.	Stk.	74½—73⅜	5	5⅜	77	
HadBeld's Steel Foundry Ord.	1	107/6—78/6	30	5⅜	106/6	
Ibbotson Bros.	5 (4 pd.)	7—6½	7½	4½	6½	
Jessop (W.) & Sons ... Ord.	5 (4 pd.)	10—8	15*	6	10⅛	
Lanarkshire Steel Cum. pref.	10	—	5	7½	7	
Lysaght (J.) ... ... Cum. pref.	1	25/—20/-	6	6	20/-	
Do. ... ... 2nd pref.	1	19/9—19/4½	6	6	20/-	
Manganese Bronze ... Ord.	1	—	6	11	1¾	
Do. ... ... Cum. pref.	1	—	6	8	4	
North-Eastern Steel ... Deb.	Stk.	—	4½	—	—	
Palmers Ship & Iron "A" ...	1	13/—9/9	Nil.	Nil.	13/6	
Scott (Walter) ... ... Ord.	1	29/4½-21/3	15	10⅝	29/-	
Do. ... ... Pref.	1	19/9—16/-	6	7½	19/9	
Sheffield Forge ... ... Ord.	1		15	4½	66/-	
Shelton Iron & Steel ... Ord.	1	24/6-16/10½	7½	6	22/10½	— -/1½
Do. ... ... Deb.	100	91½—91	5	5½	91¼xd	
S. Durham Steel & Iron Ord.	1	42/9—29/6	10	4⅞	43/-	+ 1/-
Do. ... ... Cum. pref.	1	20/9-18/7½	6	6⅜	20/-xd	
Do. ... ... Deb.	Stk.	81—80	4½	5⅜	78xd	
Steel Co. of Scotland ... Ord.	10	—	10	10	274/3	+ 33/3·
Stewarts & Lloyds Pref. ord.	10	17—16	10	6¼	16	
Do. ... ... Cum. pref.	10	—	6	4⅜	13½	
Stone (J.) ... ... Cum. pref.	10	8⅜—7⅞	5	6⅜	7⅞xd	
United States Steel ... Ord.	100$	124—109½	8	7⅛	100⅝†	
Do. ... ... Cum. pref.	100$	—	7	6	114⅜	
Vickers Ltd. ... ... Ord.	1	44/6—35/3	12½	5⅛	42/-	— -/4½
Do. ... ... Pref.	Stk.	84—81	5	6	82	
Do. ... ... Deb.	Stk.	79—74¼	4	5⅜	76	— 1½
Weardale Steel ... Def. ord.	1	32/3—23/-	19½	13⅜	28/6	+ 1/6
Do. ... ... Cum. pref.	1	25/3—18/9	6	5⅛	24/-	+ 1/-
Do. ... ... Deb.	Stk.	—	4	6½	62	
Workington Iron & Steel Ord.	1	30/3—21/-	10	6⅛	28/9	— -/3·

SHIPBUILDING AND MARINE ENGINEERING.

Armstrong, Whitworth Ord.	1	45/—36/—	12½	5⅜	41/9	+ -/3·
Do. ... ... Cum. pref.	5	73/9—67/-	4	5⅜	67/6	
Do. ... ... Deb.	Stk.	78—73	5	6⅜	76xd	
Beardmore (W.) ... ... Deb.	100	93—89	4½	5	89⅜	
Brown (John) ... ... Ord.	1 (15s. pd.)	29/—22/9	12½	7½	25/6	— -/9
Do. ... ... Cum. pref.	10	8⅛—7⅛	5	5⅜	8⅛	
Cammell Laird ... ... Ord.	5	7½—6¾	10	7⅛	6¾	
Do. ... ... Cum. pref.	5	8⅝-7⅛	6	6¾	8⅜	
Do. ... ... Deb.	100	83¾—79½	4½	5⅜	80	
Dunlop (Jas.) ... ... Ord.	1	28/9—16/-	10	9½	22/9	
Do. ... ... Cum. pref.	1	18/9—16/6	6	7⅛	17/6xd	
Fairfield Shipbldg Cum. pref.	10	8⅝—8¼	6	7⅛	8⅜	
Fleming & Ferguson ... Ord.	10	—	10	7	14½	
Gray (Wm.) ... ... Deb.	100	100—95⅜	4⅜	4⅜	100½xd	
Hawthorn (R. & W.) Leslie Ord.	10	25⅜—15½	12½	5	25⅜	
Henderson (D. & W.) Cum. pref.	1	—	5	9	1	
Richardsons Westgarth Ord.	1	10/3—5/-	Nil.	Nil.	7/10½	— -/1⅜
Do. ... ... Cum. pref.	1	19/3—12/6	Nil.	Nil.	18/-	+ -/3
Do. ... ... Deb.	Stk.	67—62	4⅜	6⅜	66xd	
Simons (W.) ... ... Cum. pref.	10	—	5	5	9⅛	
Swan, Hunter & W. R. ... Ord.	1	51⅝—33/6	12½	5⅜	50/-	
Do. ... ... Cum. pref.	1	17/3—17/-	5	5⅜	17/-	
Do. ... ... Deb.	Stk.	78—77	4⅜	5⅜	77xd	
Thornycroft (John I.) ... Ord.	1	48/—16/-	17½	8⅛	46/3	+ -/3
Do. ... ... Cum. pref	1	19/—16/-	6	6⅜	18/6	— -/6·
Do. ... ... Deb.	100	—	5	5⅜	85xd	
Wallsend Slipway ... Ord.	1	2—1½	10	5	2	
Do. ... ... Cum. pref.	1	1—1	5	5	1	

* Including bonus. † Also 20 % in shares. ‡ Treasury price.



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Extra Special Flexible Steel Wire Ropes for use on Giant Cranes, etc., in Shipyards and Engineering Works.

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This plant automatically starts up and stops at any predetermined time daily, to indicate that it is in working order.

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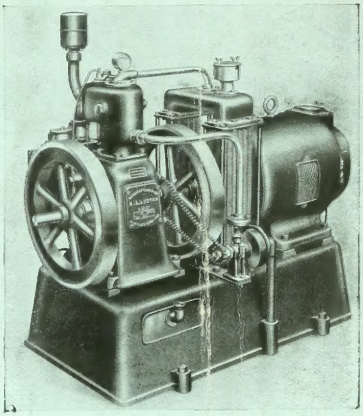

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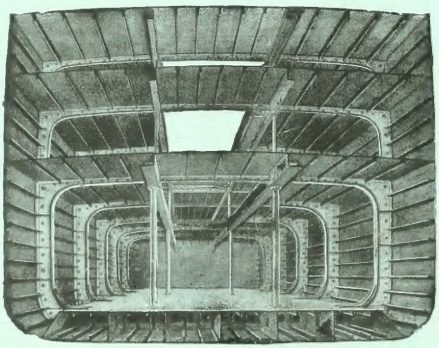
Improved Ventilation.

Reduced Cost of Maintenance.



Reduced Vibration.

800 Vessels Built or being Built, representing about 6,000,000 gross reg. tons.

310 Bulk Oil Carriers, representing about 2,800,000 gross reg. tons.

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